HOME-CRAFT RUGS

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LE BARON
WALKER

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HOMECRAFT RUGS

THEIR HISTORIC BACKGROUND, ROMANCE OF STITCHERY AND METHOD OF MAKING

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PLATE I

ANTIQUE QUILTED PRAYER RUG

Colorful embroidery combines with indented stitchery to make this a rug of singular beauty.
(From the collection of Dr. Frank Higgins, Boston. See Chap. XV.)

HOMECRAFT RUGS

THEIR HISTORIC BACKGROUND, ROMANCE OF STITCHERY AND METHOD OF MAKING

BY

Mrs. LYDIA LE BARON WALKER
"

With illustrations in color and in line, and numerous diagrams, by Mary Evangeline Walker. Also, with seventeen reproductions from photographs, many of them in color.

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To

MY HUSBAND

WILLIAM H. P. WALKER

WHO DURING HIS LIFE WAS MY INSPIRATION
AND WHOSE ENCOURAGEMENT LINGERS

44988

PUBLISHER'S NOTE

The publishers are much gratified that, in addition to the many photographs used to illustrate this volume, they could secure the work of Miss Mary Evangeline Walker, whose drawings in color and in line have added so much to the beauty and value of the book. The originals of the following plates were made by Miss Walker:

Plate II — "Old Ironsides"
Plate IV — "Lattice Rambler"
Plate X — "Window Box"
Plate XVII — "Cloisonné"
Plate XVIII — Persian Pattern and Border

The following full-page line drawings:

Page 171 — Phrygian Rug
Page 175 — Phrygian Rug (quarter-section)
Page 183 — "The Visitors"
Page 185 — Assisi Bird Pattern (Negative)
Page 239 — "Cave Canem"
Page 305 — Tree of Life and Knop and Flower
Page 317 — Medici Figurines
Page 323 — Assisi Bird Pattern (Positive)

And all of the smaller line drawings and diagrams inserted in the text.

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PREFACE

It is the province of this volume to tell of rugs that any woman can make, with equipments that are not too cumbersome to be housed in any home, however small.

Each rug, in full or in part, has been worked by me. This is of moment only in that it indicates an actual, not a theoretical, knowledge of the crafts, and accuracy of directions.

The letters and queries that have come to me during the fifteen years or more that I have been writing on Oriental and homecraft rugs in such magazines as *House and Garden, The Ladies' Home Journal, Modern Priscilla,* etc., have been the incentive to the book. In it the evolution and pedigree of American homecraft rugs are set forth.

So little was known of the history and origin of handmade rugs apart from Oriental carpets, that research and investigation alone revealed it. The results are herein set forth, together with a solution of the hitherto controversial subject of the origin of the stitchery of the hooked rug.

Special attention has been paid to patterns and motifs so that rug makers can reproduce those pictured and also combine units and make their own designs. Emphasis has been put upon original patterns of rugs indicating a close co-relation of design to the peculiarities of any

particular craft. This does not bar the adaptation of patterns to other crafts, if the rug maker so elects.

The book is sent forth in the hope that it may help to a better understanding of homecraft rugs as well as further the making of floor coverings of quality, and that it may prove of interest to collectors as well as craftsmen.

Appreciation for courtesies extended in connection with the preparation of this volume is gratefully offered to Mr. Henry Hunt Clark of the Boston Museum of Fine Arts; to members of the staff of The Metropolitan Museum of Art and The American Museum of Natural History, New York; to The Pennsylvania Museum, Philadelphia; to The Kensington Museum and Royal Society of Needlework, London; to the Exposition at Wembley, England; to the Cluny Museum, Paris, and the exhibits at Versailles. Acknowledgment is also made to Mr. Maynard, of Special Libraries Department of the Boston Public Library; to Miss Walsh and Miss Hawkes of the Cambridge Library; to Mr. George Francis Dow, Curator of the Society for the Preservation of New England Antiquities; to Mr. Homer Eaton Keyes, Editor of *Antiques;* to Mr. Elwyn Gowen, of the board of councilors, Boston Society of Arts and Crafts. Valuable cooperation was also received from the late Mrs. Joseph R. Draper, of Auburndale, Mass., and from Mr. G. Foster Smith, of Brooklyn, N. Y.

L. Le B. W.

Cambridge, Mass.
June, 1929.

Part I
THE EVOLUTION OF RUGCRAFT

HOMECRAFT RUGS

I

THE RENAISSANCE OF RUGCRAFT

The history of rugcraft is one of storied interest, not written, but wrought in strands of yarn, silk, flax, hemp and cotton. Long prior to the art of weaving, according to some authorities, coverings for the ground or floors of tents were in existence. These were made by the tread of feet, their use being coincident with their fashioning. The felting process was continued by the repeated strewing of shreds of material of sufficient scale-texture or tooth to mat under pressure. It is probable that skins of animals were employed as floor coverings at a very early time by primitive peoples, but as these were not made, but merely made use of, they do not belong in the rugcraft category.

The origin of the craft is locked in the archives of antiquity, the key to which if ever found will be in the hands of archæologists. Yet so linked with the present is the work, that it is pursued with as much avidity to-day as it was of old. No lost art this, but one that is ever new, since with each rug fashioned, it is recreated, either to repeat the record of centuries-old stitchery, or to produce new types of rugs with novel or adapted patterns,

and sometimes in mediums that would have been strange indeed to ancient rug makers.

The rugs of the remote past are not only amazing examples of archaic textile art, but are annals of racial life, reflecting the rise and fall of dynasties, the religious rites and customs pertaining to them, and the chronicles of peoples depicted in mystic symbolism, not all of it translatable, but as charged with significance as the Rosetta Stone, or any old hieroglyphics. So it is that rugs bring a message from ancient to modern civilization.

The finger of time curiously points to America as one possible source of inspiration for primitive rug motifs, coupling the designs of the Far Eastern rug makers, with those of the Western world. The basis for this is the fact that motifs, identical with those found in some very early Oriental rugs, are also found in the Occident, appearing in carvings on the temples of the Mayas of Yucatan. This strengthens the theory that, in the dim ages, there existed a civilization in the Occident thousands of years before Columbus sailed to America, centuries prior to the reign of Confucius in China, or ever the land of Egypt was peopled.

Enchantment lurks in the account of how the designs may have wended their adventurous way from America to Asia, but it must suffice us to touch but a single point, one of pertinent interest, namely, the linking of American and Oriental rugcraft. That the weaving of rugs was born in the Far East is apparently undisputed. Its growth and development can be traced across Europe

and England, thence over the Atlantic to America, that is reputed to have mothered the first elements of rug designs. Concerning the latter there is this much certainty — that they were coexistent with those of the Orient.

The origin of the Navajo blanket rugs of the North American Indians is uncertain, but there is reason for attributing the Navajo proficiency in weaving to the Moors, who brought so much knowledge of Oriental crafts and arts to Spain. Here again a roundabout migration of technical skill is apparent, for it seems that through Spanish conquests in America the Pueblo Indians learned wool weaving. From them the Navajos may have captured the art, but in any event the blanket rug fabrics of the latter tribe have assumed a place of significance in the annals of this country. The native looms are of the same crude sort found in the Orient. There would appear to be something necessary to the character of the rug that was imparted by the loom, for the textile cannot or does not remain the same when power machinery of any sort is used.

When the United States was settled by the colonists, and weaving began in those pioneer days, the looms were of another type altogether. Hand looms, we call them, though the manipulation was shared by hand and foot. As the term *rug* was applied to coverlets for beds, it is perplexing to know when rugs and carpets were first used as floor coverings. However, it must have been at an early date, and the probabilities are that an extra-heavy blanket, hand-woven from homespun thread, served

the purpose. It could have been only when the actual necessities of bodily warmth were provided for that floor coverings could be considered. Had it not been for the rigors of the New England and Canadian climates, rugs would, in all likelihood, have appeared even later. Cold floors demanded coverings as soon as they could be given attention.

It should not be understood that a coverlet "rug" was left permanently on the floor, even when it may have served the purpose of a carpet. In doing a double duty, and being carefully looked out for between times of using, it is reminiscent of the carpets described in the *Arabian Nights' Entertainment.*

"In Egypt," so runs the tale, "there were neither bedsteads nor bedrooms. The carpets and mattresses, pillows and cushions (sheets were unknown) are spread out when wanted, and during the day are put into chests, or cupboards, or only rolled up in a corner of the room."

In the old Colonial records, inventories, etc., the word *carpet* was synonymous with *table-cover.* And so here, again, is met the difficulty of the undefined. Yet just so long as points remain in the twilight of uncertainty, investigation flourishes. The mysterious is always fascinating, and rug collectors and craftsmen poke about in the dimming years, hoping to get some penetrating ray to focus on and reveal the origin and sequences of rug types beyond the venture of a doubt.

It is certain that floor coverings of some types were used early in the homemaking hazards of American

settlers. "Floor coverings are a radical necessity in certain climes," asserts Sydney Humphries, and there can be no question that the colonists found this true in America. "Rich floor coverings, yielding softly to the feet," were made in as much profusion as circumstances permitted, although these could not well stand comparison with such an one, for instance, as Jason is reputed to have trod upon in the palace of Acetes.

The quaint charm about the early craft rugs of America is due in part to their having been made expressly for the individual homes in which they were used. This same adapting of rugs to a specific room, or the architectural features of a house, remains to-day in the hands of the home maker who, by wise selections of models to suit her preference in medium, design and color, can fashion floor coverings to conform to her needs and tastes, with a skill comparable to that of a couturier devising costumes for a patron.

Curious indeed is the increasing tendency to classify as handmade, only early Colonial rugs. This assumption ignores the fact that the finest as well as the cruder Eastern rugs in peasant style are all handmade. The craft rests with dignified security on the laurels of the past as well as the prestige of the present.

Diversity is a conspicuous element in the rugs of to-day. Never before were there so many varieties nor more beautiful ones. Old tapestry and needlepoint rugs are being revived with a zeal that bespeaks a genuine appreciation of the marvels of fine carpets in classic style.

Hooked rugs are in great demand. Quilted rugs are again coming into their own, after centuries of oblivion. Felt rugs revert to primeval days, preserving the graces of modern artistry. Folk rugs are given new life by turning their structural possibilities into channels of applied decoration. No longer are they mere haphazard incidents in floor coverings. The crochet rug is given new appeal and, as it is one of the rugs most rapidly made, it needed only to be developed to its fullest possibilities, to assume rank with the worthy. Patchwork appliqué shines in the light of its own reflected glory down the centuries. Embroidered rugs continually exhibit new phases. Rugs of startling, modernistic treatment flaunt themselves. And among other rugs, those which feature the characteristics of nations and tribes are entering into the scope of present-day rugcraft. These, and all the many kinds, revived and modern, are forming a new stimulus in the era already noted for its renaissance of rugcraft.

It is interesting to note that, during the early years in America, rugs were made because of necessity or by reason of thrifty instincts. To-day no such impetus is responsible. A genuine zeal for handicraft has sprung up, which, with each succeeding year grows stronger. Also, a better understanding of interior decoration prevails.

Equipments are of the simplest sort, and the stitchery in each type is entirely free from any complexity. There are rugs to suit every one's special preference in handicraft, from knitting to needlepoint, and types exist to suit all styles of architectural requirements. There are

rugs that actually can be made with no cost, converting into floor coverings materials that would otherwise be discarded. But there are those, too, which, without being expensive, leave cost out of their consideration and make beauty paramount.

II

RUG MAKING A HOME INDUSTRY

From time immemorial rug making has been in the hands of women. In the dim past it was their province to make floor coverings, not only for their own homes, but, as time advanced, for the market-place also. It was only under duress that men did rug making, except in India. This still remains true, to a large extent, though the demand for Eastern rugs has become so great throughout the world to-day that men are often found weaving with the women. In the Western countries handmade rugs are fashioned by women, except in rare instances. When men take up rug making it implies a genuine interest in the art and craft of textiles rather than the impulse to create floor coverings.

Not only were the rugs of the Orient made by women, but they were, of necessity, homemade, whether fashioned inside the tent or rude dwelling or beyond the doorway. This latter place was favored especially by nomad tribes. No factories existed. Homecraft rugs to-day, therefore, have the precedent of primeval home industry, which, notwithstanding certain inroads, has remained throughout the centuries in the hands of women. It is interesting to note, in this connection, that the very meaning of wife and spinster has an impregnated hint of textile

homecraft in the origin of each. *Spinster* signifies the maiden who spins the thread from which her trousseau is to be made. In the Orient, part of her dowry was a kis-khileem rug of her own making. The word *wife* means "a woman who works with a distaff and weaves a web," and comes from the old Anglo-Saxon and German verb *wefan* and the word *weih*.

Alfred, the early English king, mentions in his will those "on the spindle side" and those "on the spear side" of the household, indicating by the antithesis, the relative value of the importance of work done by each. Spinster and wife became domestic titles, in much the same way as did knight a military one. So weaving was a cheriched art, and likewise rug making came to be.

There are three divisions under the heading of rug-craft, all so closely allied that, unless the subtle and signal differences are comprehended, they appear identical, even to their initial letters. They are *handmade, handicraft,* and *homemade*. All rugs manually constructed are rightfully known as handmade rugs, and in an absolutely literal sense of the word are handicraft also; yet in the common acceptance of the terms there remains a difference, and it is this that demands attention. *Handicraft* emphasizes technique, even in its terminology, while *handmade* stresses the motive power, which is so expert in some instances that the craft is dominated by the artistry. It is when a craft reaches the apex of its possibilities that it falls in line with an art which presupposes

the perfection of craft. It would therefore appear an anomaly to classify under handicraft such masterpieces of weaving and stitchery as genuine tapestries, real laces, Cashmere shawls and Oriental rugs, prized in museums as handmade art treasures.

Because Oriental rugs are so often left out of consideration when speaking of handmade rugs, and only those rugs included which belong to Colonial or modern handicraft, it is well to have a clearly defined and correct understanding of terms which, too often, are blurred in significance through common usage. Homecraft rugs is an inclusive term embracing all floor coverings fashioned by hand. They may be fashioned in the Orient, or the Occident, perhaps by our own firesides, but, in whatever place, the work centers about the home, according to tradition and practice. It has only been within a comparatively short period that commercial interests have in some instances introduced changes in the Orient whereby many rug makers assemble under one roof to work under the same direction, thus instilling a factory element into the handmade, and hitherto homemade, rugs. In the Occident there have been various community enterprises in rug making. In each case the work was done as a home industry offering women opportunity for earning money without going away.

There is nothing so complicated nor difficult in the knot-tying or stitchery of Oriental rugs, as to preclude the making of such floor coverings by any person who would give the time and zeal to the work. But the mod-

ern rug maker of the Western world would scarcely choose the fine yarn strands, nor elect to tie knots to approximate the 530 to the square inch found in the Ardebil Carpet — that undisputed masterpiece of the Shah Abbas period. With a coarser medium, however, present-day home rug makers may be lured into creating rugs of the Oriental type in modified form, or even to use the precise knots or flat weave stitchery of the Far East. There, little children work on rugs; and those of us who are acquainted, through experience, with the actual simplicity of the method, can readily understand why it is within their scope. It is the patience required to make an Oriental rug that is overwhelming in the modern life of complexity.

Such conditions do not prevail in handicraft rugs, whether they revert to types familiar to the ancients, or are of typically modern tendency. Time is no barrier to the making of them, for they take no longer to fashion than many kinds of practised fancywork.

Easy methods are found for simulating work that would otherwise be impractical under present-day living conditions. Creative ability and mechanical ingenuity are fostered in the making of designs and methods of handicraft. And, since there is no form of needlework that does more to increase the attractiveness of a home than rug making, the artistic and practical value of the craft is becoming more and more fully appreciated. In America the vogue of Colonial rugs is notable, while in England the renaissance of needlepoint em-

broidery has brought about the working of gros point carpets.

Interest in all handmade floor coverings is keen; and the making of them is an accomplishment in which, today as of old, great pride is taken.

III

EQUIPMENTS AND CLASSIFICATIONS

Handicraft rugs derive their names either from the technique of their construction or the mediums from which they are made. In this they differ radically from Oriental rugs, which are extremely difficult to classify because their names may come from any one of a dozen or more sources, such as the tribe by which they were made, the country where they were made, the port from which they were shipped, etc. All are mystifying to the uninitiate, and often baffling to the expert. The handicraft rug is given immediate recognition as soon as its name is known. It can be pigeon-holed according to this with a refreshing definiteness. The craft, the medium, or the design motif, however combined in rug patterns, is the criterion for cataloguing.

The tool and equipment, whatever the kind, is simple and, in some instances, even primitive. For example, the knitting-needles may be smoothly polished round sticks of wood or bone, as they were originally. The crochet-needle may be similarly fashioned, except that it has a hook shape at one end. The other end may be tipped with a ball or acorn-shaped ornament. Such a tip has a definite usefulness, for in some forms of crocheting in which stitches are all cast off and on the needle in alternate rows, it holds them on the needle, however crowded

it may get. It is seldom, to-day, that a rug-hook is a hand-wrought nail, or the tine of a two-pronged fork bent to form a hook, after the other tine has been filed off, as in olden times. Its shape is the same, however. The sewing-needle is a replica of the ancient thorn or fish-bone used for taking stitches, only it has the improvement of an eye in the blunt end instead of a groove for holding the thread.

A rug frame may be merely four sticks of well-planed wood clamped at the corners to make it the desired size and shape. The loom for the hand-woven rug may be similar except that it has the top and bottom stretchers marked off with the indentations to hold the warp threads equally distant. This resembles the primitive looms, and no more intricate weaving than can be done on such a loom is included in the accounts given in the following pages. It is on the primitive looms that the finest rugs in the world are woven.

With whatever tool or equipment handmade rugs are fashioned, they all belong to one of two groups, according to their surface structure. If made of short, upstanding threads, a pile rug results. If the rug has a flat surface, it is a non-pile, or smooth-face rug. If made by a power loom the carpet is said to be of the " ingrain " type.

Handicraft flat-weave rugs have wide diversity. They may be of the tapestry order (*tapis ras*); of the fabric rug type, such as quilted rugs; or be embroidered, knitted, crocheted, needle-woven, etc.

The pile (*tapis moquette*) rugs may have a loop-pile (*bouclé*) or a cut-pile (*velute*) finish. Oriental rugs, apart from the early loop-made carpets, have a cut pile. In handicraft rugs, loops are frequently left uncut, as instanced particularly in unsheared hooked rugs. In Europe some of the Italian and Spanish rugs are *bouclé;* and in power-loom carpets those known as " Brussels " have the loop pile.

In this connection it is of interest to note what Sir George Birdwood says in his comprehensive volume, " The Industrial Arts of India," relative to the origin of pile rugs:

" As velvet (*makhmal*) probably originated in Central Asia, and certainly felt, I think it very likely that it was there that the Turkish tribes first developed the art of sewing tufts of wool on strings of the warp of the carpets they learned to make from the Persians, and that the manufacture of these pile carpets was thus introduced by the Saracens into Europe from Turkestan, through Persia. The Turks were driven to this invention by the greater coldness of their climate."

It is quite possible that one reason for the popularity of hooked rugs in the New World was that they gave more warmth than floor coverings minus a pile. Winters were severe in the parts of America first settled.

With the exception of braided and stencil rugs, or those ornamented with a brush, all types of rugs, whether made with an ordinary needle, a crochet-needle, knitting-needles, a rug-hook or punch, or on a loom, can be de-

veloped to have a pile surface. All of these, with the sole exception of the hooked or punch-hooked rug, may also be developed in flat weave. The surface finish depends on the particular kind of rug constructed. Each type of rug will be definitely described under its more specific classification.

In the rugs made with the ordinary sewing-needle — that is, the embroidered rugs — there is a wide range of pile stitchery. Chief among these, the Smyrna-stitch, also called the double knotted-stitch, is excellent. It closely resembles the double Maltese-stitch, so much used on the Island of Malta in connection with interior decoration. This stitch is associated more with furniture needlework than floor coverings, while Smyrna-stitch pertains to carpets. This stitch derives its name from Smyrna rugs of the Occident, a term once applied in a generic way to Oriental rugs because they were shipped from Smyrna. This city is a great shipping port for rugs, though not a great weaving center. Needlecraft Smyrna rugs are exquisite pieces of embroidery made with a large and rapidly worked stitch.

There is also the single knotted-stitch and the single Maltese-stitch. Plush-stitch is an excellent pile embroidery stitch for rugs. Tassel-stitch is not quite so good. Both of these are stitches used in what was known at one time as " Berlin Work." Single and double knotted-stitch (Smyrna) are tapestry stitches, while the Maltese-stitches belong to a group known as linen stitches because they are so generally employed on linen. All are counted-

thread stitches similar to canvas stitches, and adaptable to rugcraft.

It was in warmer climes that the non-pile carpets had their origin, which is directly traceable to embroideries of the remote past. It is manifest that carpets first served as hangings. It was their use as floor coverings for special church ceremonials that brought about a transformation, or rather a two-fold use for the textiles. As these were ornamented with hand stitchery, the embroidered rugs have precedent above all other textile floor coverings in respect to their antiquity.

Pliny, in referring to carpets, says: "The Gauls embroider them in a different manner from that practised by the Parthians."

The earliest known Egyptian carpet — which is, I believe, the first example of a carpet that has yet come to light in any country — is a curiously wrought textile, the embroidery being done directly on the warp threads.

These facts lend a definite fascination to the work of embroidering rugs to-day, which has returned to vogue in old and new guises to tempt the needleworker who elects to make rugs of flat surface rather than pile carpets.

Apart from the classification of handmade rugs according to their surface finishes, there are five other divisions into which they naturally are grouped according to their textile qualities. These are as follows:

1. *Newly constructed textiles.* To this group belong all rugs in which the entire fabric is made, whatever the medium, and with whatever tool or equipment.

Examples: Braided, crocheted, needlewoven, etc.

2. *Superimposed textiles.* To this group belong all rugs in which a surface of another medium or a like one is superimposed on a foundation that is completely concealed thereby.

Examples: Hooked, mosaic (button, dollar, spool), tufted, etc.

3. *Reconstructed and newly patterned textiles.* To this group belong all rugs in which a material or a series of pieces of material joined together forms a foundation that is embellished with or without concealing the background. The decoration may be of other goods cut into ornamental motifs and appliquéd onto the rug foundation, or it may consist of stitchery or stencil.

Examples: Piecework, appliqué, embroidered, etc.

4. *Quilted textiles.* To this group belong all rugs ornamented with indented stitchery, whether this alone transforms the textile or whether it is combined with appliqué or embroidery, for it is the quilting that binds two or more materials together to supply sufficient body for a floor covering.

5. *Replica textiles.* To this group belong all rugs that are made to reproduce characteristics of floor coverings of tribes, nations, etc., so accurately that they merit the classification of replicas.

Examples: Shemakha and other Oriental replicas, Navajo, etc.

Still another classification is according to cost of making. This will be considered later. It will be noticed that

PLATE III RUG SAMPLERS

A, Border of antique Daghestan in Turkey Work. *B*, Shirvan border, knot-knit pile. *C*, Australian pile, Daghestan border and motif. *D*, Caucasian field motif, pile crochet. *E*, Enlarged section of Plate II. *F*, Herati border, Afghan stitch. (*Samplers executed by the Author*).

in many instances the same rug belongs in more than one group. For example, a crocheted rug may be made with or without a pile; an embroidered rug may be a replica; a jute rug may be a hooked rug, etc., etc. There must necessarily be this overlapping yet fortunately it does not deter each rug from being immediately recognizable. The name remains descriptive.

Part II

RUGS OF NEWLY CONSTRUCTED TEXTILES

IV

THE BRAIDED RUG

The braided rug is distinguished by rhythm of technique, gratifying to the eye, sturdiness of texture, satisfying to the tread, and simplicity of construction, appealing to the rug maker. It is pre-eminently of the peasant type of handicraft, one in which the structure determines the decoration. Yet variety can be introduced to a surprising degree, due to combinations of color, to the shaping of braids into motifs, and to the several ways of fashioning the rugs themselves.

There is every reason to believe that braided or plaited grasses were the first attempts of primitive peoples to fashion floor coverings in any way resembling woven textiles. Originally, no consecutive plan of work was followed, the plaiting of strands being akin to that found in bird's nests, and apparently almost as much a matter of instinct. When grasses, sedges, etc., strewn upon the ground to fill in some hollow or cover the mud, did not "felt" or "mat" together under foot, as these materials would not, then the twining or braiding of one or more strands over and under others would hold them in position.

Plaiting or braiding, found to a notable degree in basketry, reverts to the Stone Age, which was prior to the

time when any metal tools or implements were made. This is one reason for appreciating that the craft is of the earliest type, as it requires no tool whatsoever. It is handicraft in its purest form, a prehistoric weaving industry brought to a high degree of perfection without any mechanical device.

Indeed, a braided rug could be made to-day without equipment of any sort, should one choose to do so. It would require expert skill, well beyond that evinced in the easy task of ordinary braiding which even a child can do, and there would be no object in making such a rug other than to demonstrate the possibilities of perfection in the craft when applied to rug making. But the startling fact remains that it is quite within the bounds of possibility to complete a braided rug of many strands plaited, and finished with a short heavy fringe of the loose strands knotted at each end, and to do the entire work with the hands alone. The interest in this lies in the unique fact of this being a handicraft where fingers are independent of other aids in constructing a floor covering, neither crude nor unattractive, a product fine in workmanship, with genuine charm in the colors combined.

The words "braid" and "plait" are not nearly as old as is the work itself. The Old English verb "bregdan," meaning to move back and forth quickly, was later contracted to "bredan," signifying to braid or plait. The rapid movement of the fingers and the speed with which braids grow is brought out in the very words, which are

indeed significant of the process. In rug making, the length of a braid increases almost magically under the spell of the worker's touch.

The idea of folding as well as intertwining is brought out in the word plait, and both operations are performed in making braided rugs. There is the close relation of terms and processes to be found in crafts that have grown with the ages.

A braided textile is distinguished from one that is woven by the direction of the strands. In the former but one set of strands is employed and these cross at angles "other than right angles." The one set of strands serves the double purpose of warp and weft. In regulation woven textiles the threads cross at right angles, thus necessitating two sets of threads — the lengthwise warp and the crosswise weft. Braided textiles do not lend themselves well to large one-piece surface construction, but to narrow, supple bandings, which are called braids after the process of making. Stout fabric braids sewed together form rugs. These are totally unlike loom-woven rugs.

Flexibility is the dominating characteristic of braids, and it is this fundamental element that should never be lost sight of by the rug maker. It was used by the ancient Danes in fashioning garnitures from narrow braids for trimming dresses. In mediums of many sorts, from grasses used by the aborigines for floor coverings and still employed in some modern grass rugs, to gold wire cunningly wrought into jewelry by goldsmiths, braiding

has been practised for long centuries. Articles exhumed in excavations give evidence of this.

The natives of India excel in the beauty of their braided work, getting the most gorgeous effects with gold and silver braids used in conjunction with inlay appliqué. The Early Egyptians in the Twelfth and Thirteenth Dynasties made use of plaited and braided strands of gold and silver wire in jewelry remarkable for its perfection of technique. Intricate braids of fine grasses are made into ornaments worn by savage tribes in India even to this very day. The delicacy of workmanship is emphasized in the various types of braiding instanced, and it is a far cry from this to the sturdiness found in braided floor coverings. Yet the adaptability of braiding to each purpose is evident. In the heavy cloth braids no whit of suppleness is lost, while the weight and size of the fabric braids are as essential to satisfactory rugs as are the lightness and threadlike quality of gold and silver wire to *bijouterie,* or the gossamer fineness of silken strands to trimming.

The use of braids to fabricate entire surfaces complete in themselves is peculiar to braided rugs. It took the inventiveness of the home-maker, under pressure of necessity for new floor coverings, to conceive of putting strips of previously woven goods into braids with which to fashion them.

A haze of uncertainty surrounds the early history of these textile braided rugs. It is too impenetrable to permit one to discover just where the floor covering originated.

In all probability, it was either in the British Isles, or in some part of America settled by people from Great Britain. There is little reason to doubt that braided corn husk mats preceded braided textile rugs, and that these were known to the English as well as the American colonists. As for the technique of braiding and plaiting, it was centuries old, as we have seen.

The special element of ingenuity, therefore, in the braided textile floor coverings was in the use of an already woven material as strands for plaits with which to construct an entirely different textile. It was not sufficient that the rug form a floor covering of protection against roughness and splinters, for corn husks or sedges would serve such an object, as they had before. A warm floor covering was needed in the rigorous New England winters before central heating was instituted and when houses were cold and draughty.

Braided fabric rugs fulfil this mission in a decorative way. Not only is the material itself of warm texture, especially when woolen, but each strand is of many thicknesses due to the folding of strands and their overlapping in plaiting. Each strand, as it underlays the other, forms a padding for the one above. The tread is thus softened and durability is increased. Putting all these desirable qualities together, plus the speed of braiding, it is easy to understand the popularity of the braided rug.

Two other excellent elements have still to be given. One is that these rugs lie flat on the floor without any tendency to curl or to " kick up," as folding over of rugs

is termed. The other is that they are thrifty, for old cloth known as "rags" in the lore of rugcraft can be used just as well as new. Short pieces can be seamed together without the joinings being noticeable in the finished rug.

The preparation of the medium is a matter of first importance in the actual craftsmanship, though prior to this the color scheme should have been definitely planned. The cloth of whatever kind should be cut — or torn when the material permits. It should be in widths that allow for three turnings — one at each edge and one down the middle — leaving the finished strand not more than one and one-quarter inches wide, nor less than three-quarters inch. The difference in the widths depends on the fineness of the braid to be used. The width of the plaited braid should not be less than one-half of an inch nor more than one inch. In goods as soft as chambray three strands, each measuring one inch folded, will be approximately one inch wide when plaited. Heavy material will be three-quarters inch wide when made of three strands folded to the three-quarter inch width. When fabrics are extra heavy they should be cut a trifle narrower than the measurements given and be folded in less at the edges. On the other hand, softer and thinner goods will require extra width and deeper turnings. Thus only can the strands made of varying weights of goods be formed of equal size.

The novice may prepare the strands by folding and pressing, or folding and basting, so that all are the same

width. The expert folds as she works, and this knack can be learned easily. It consists of pressing the middle of a strand down with the thumb, while with the first and second fingers the edges are turned in toward the thumb. Both edges are thus secured inside the strand which is folded down the center. Very little practise is required to become expert in this, and it makes the braiding process rapid work.

When possible, have the strands come lengthwise of the goods rather than crosswise. New goods of most weaves can be torn in the following way: slash the crosswise end of the goods, making the notches about three inches deep. Gather alternate ends in the right and left hand and quickly spread the arms apart. The goods will be torn evenly into strips. Strands three inches wide, folded at each edge to the center and again through the center give excellent wearing rugs when braided. The braids are one inch wide when completed if plaited firmly. For large rugs, this size is recommended. Braids three-quarters inch wide, however, are considered perfect in their suitability to the purpose, being fine enough for beauty of texture and heavy enough for durability. Half-inch braids are rare, being too fine.

It is a wise precaution to keep strands of the same or similar colors together. If these strands are turned in, and pressed or basted, each shade should be wound on a piece of stiff cardboard, for thus it remains smooth. If turned in as braided, the strips keep in good condition if wound in balls; or they may be loosely folded and put

in bags, classified according to color. In some way the strips should be kept from getting mussed. Rug makers differ in their methods of doing this, as the several ways suggested give evidence.

The finest rugs are of woolen strips. With these velvets can be used successfully. It is unwise to combine cotton, silk or linen with wool. Silk will wear out before the wool, and the texture of cotton and linen does not accord with either wool or silk. Also the shrinkage of materials varies. Rugs of cotton and linen can be laundered. While it is possible to wash woolen braided rugs, they are heavy, and large sizes should be cleansed rather than washed. Goods with a tendency to run should be washed before putting into the rugs, to prevent crocking afterward.

In considering materials, it should be remembered that for braided floor coverings silk is not suitable. It makes beautiful braided table covers, now in favor, and also the removable mats to put on chairs instead of cushions to soften the seats, and to place under the feet when lying down in the day-time. Silk stockings can be used for this work.

Light weight woolen suiting makes handsome braided rugs. Jersey cloth is also excellent. It should be used wrong side out, as it has a tendency to turn thus, and it is like working against the grain to attempt to use it right side out. Woolen, cotton and jute roving, or several strands of jute yarn may form a single strand for braiding. Candle-wicking is adapted to the purpose. There is

nothing better for braided rugs, however, than woolen cloth. Chambray, gingham, and cheap cotton cloth (dyed in attractive colors) lend themselves well. In colonial days discarded garments made the working medium, and they are exactly as appropriate to-day as then. Such rugs are the embodiment of thrift. A good grade of outing-flannel is an excellent medium. The surface resembles wool, and the rugs are washable.

The technique of braiding is simplicity itself. In the three-strand braid, after sewing the ends of the strips together, fold each outside strand over the center one, alternately throughout the length. As soon as the braid is long enough, weight it at the end so that a purchase can be had on the work. When the braid is three-quarters yard long, the end can be held firmly under one foot. Expert workers use this easy method. They also are careful to fold each strand over as it is plaited, thus making a flat, smooth turning and an even, continuous edge. This skilful note in braiding is found in braids of straw in hats. The ordinary way of braiding hair is not nearly so good, for in this, hundreds of separate tendrils form one strand and each adjusts itself to those about it. In textile braids, as in straw, each strand has a definite width, fine or coarse, and hence the necessity of folding it to aid in adjustment. It requires but a few moments' practise to acquire the knack of folding over the outer strands instead of merely drawing them around, and the good results are immediately apparent.

The four-strand braid is almost as easy to plait as the

three. Start the work by folding the right-edge strand over the one next it. The left-edge strand goes *under* the one next it and over the next, which will be the one plaited over from the right edge. Repeat this process to the end of the braid.

Braids of more strands follow this same general method. When the number of strands is odd (5, 7, 9, etc.) each outer strand goes *over* the one next it, as in the three-strand braid. When the number of strands is even (4, 6, 8, etc.) the right-hand strand goes *over,* and the left-hand strand goes *under* the one next it. Each strand then interlaces with the one next it, over or under as the sequence demands.

In starting a many-strand braid the plaiting should progress exactly as if it had been interrupted. That is, the strands, if even, will divide in direction from the center, half taking the right-hand course and half the left. If strands are uneven the center one may go in either direction to complete its path to the edge of the braid. Each strand must extend diagonally from one edge of the braid to the other. Strands should be plaited from each edge to the center until the special strands being plaited at any one time cross in the center. Then one new strand from each side should be so plaited. It is the starting of a many-strand braid that is the puzzling part. By following the directions given, this difficulty should be eliminated. The matter of outstanding importance is that each strand progresses in a straight diagonal line from one edge of the braid to the other. This

is accomplished easily by interlacing strands in correct sequence, which is a fundamental principle of braiding.

The length of a many-strand braid does not increase with the same rapidity as the three-strand, but since the width is greater the square surface completed in a given time is approximately the same regardless of the number. The many-strand braid is by far the more interesting to plait.

The shape of a rug made of such braid is usually rectangular and is made of many strips about the length of the rug. These are sewed together until the width is right for the field. Several rows of black or some dark-colored three-strand braid is then sewed around this field as a border.

The Lattice Rambler rug presents this type of floor covering in an entirely new guise. It is a welcome innovation demonstrating how in braided rugs design can be created through the union of technique and construction. Instead of being made of many comparatively short strips, the entire field is of one continuous braid of eight strands. Four of these are neutral background and two dominant design strands. The latter form the two end strips (numbers one and eight) in the arrangement of strips, thus bringing the six background strips in the center between, when the plaiting starts. When the braid is sewed to form the field, these two design strands of major and minor color value make a double lattice, each lattice intercepting and punctuating the other at regular inter-

vals throughout the entire length and breadth of the rug surface (see Plate IV).

The roses which form a border at each end of the lattice field are circles of three-strand braid. The diameter of each flower is the same as that of a semicircle at the side of the rug where the braid turns. It will be seen at a glance that the diameter, then, is twice the width of the eight-strand braid. These calculations are significant, for they insure uninterrupted symmetry in the crescent contour of the rug.

An impression of stamens is produced in the roses by threading strands of yellow medium through those at the center of the flowers. Replace two floral strands with black in the portion of plaiting that comes at circumferences and thus accent outlines. When finishing off each rose, tuck the end of plaiting under the flower and secure with a few stitches. Sew the roses together at these places and the junctures will scarcely be visible.

While this stylized rug, with its picturesque name, presents no structural difficulties, there is a certain knack in turning the eight-strand braid to insure precise matching of design strands and to preserve a smooth, flat surface. The strands along the inner edge of the curve should be drawn tight and the released length be pushed to the outer edge to supply fulness for the requisite flare.

A double lattice rug is also interesting. It is made by omitting the rose border and sewing the continuous braid in lengthwise instead of crosswise sequence. This brings the curves at the ends of the rug, leaving the sides

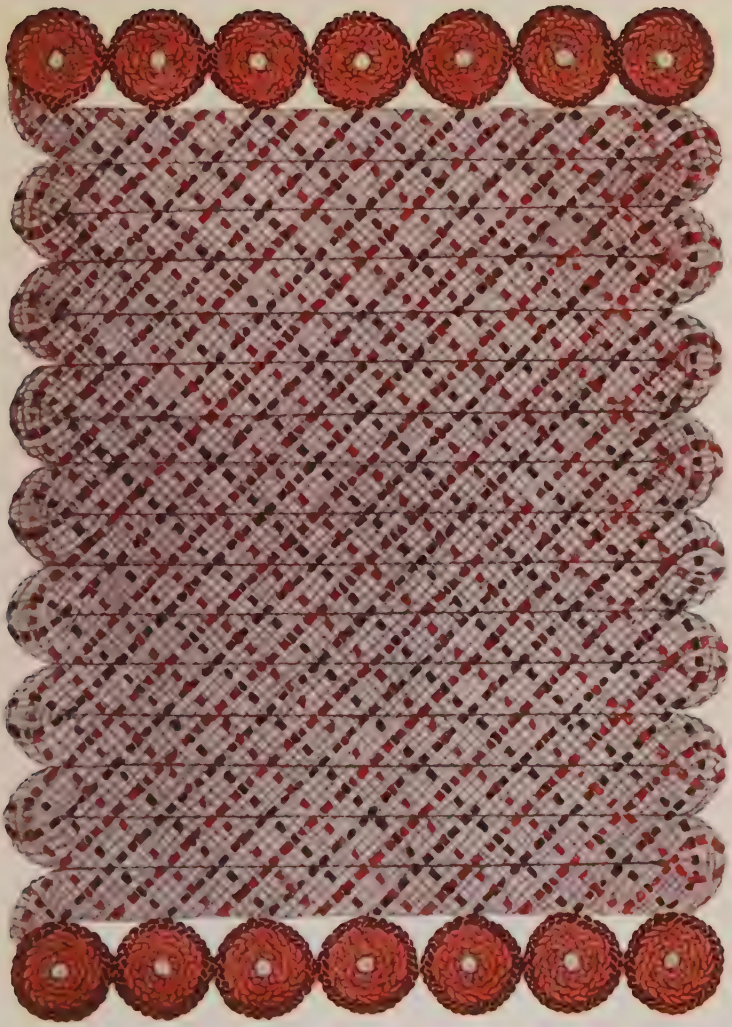


PLATE IV LATTICE RAMBLER

A new departure in braided rugcraft, with contrasting border of stylized roses.

PLATE V

REVERSE OF SAMPLERS

The samplers illustrated by Plate III are here shown in reverse. The ambitious rug maker can readily copy these patterns. (Only samplers B and D are worked on canvas; see Plate III. *Samplers executed by the Author.*)

straight. There is a gratifying sense of completeness in this rug formation that is totally lacking in the single or double lattice rug made of separate strips of braid. By using the continuous braid the design is never cut off abruptly, but is made to conform to the rug limitations. No added finish is needed at rug ends, for the curves are graceful and adequate.

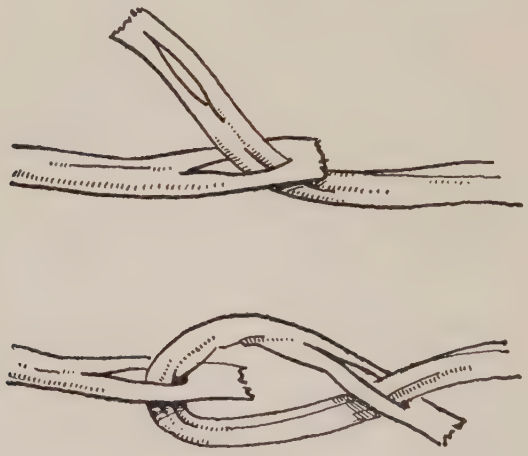
Whatever the number of strands used in a braid, they should never be very long. They hinder quick work. Lengths from one to one and one-half yards are best. It is true that strands wound into balls or about cardboard may be used in the same way that bobbins are employed in lace making. This method is not so advantageous, however, as might at first appear, for threads in lace making are so fine that bobbins are small and manageable, while textile strands are big and unwieldy.

The side of braid that is uppermost when plaiting is the right side, although there is no actual marked difference between the right and wrong side. It is simple to watch the work on the side that is uppermost and see that strands are folded and turned well and lie smoothly. Some workers put a pin in the right side when they stop plaiting, so that they know instantly which side should be uppermost when they begin to braid again.

To avoid bulky appearance in a braid, it is important to have the places where strands are joined to lengthen them come irregularly and not together in a line across the work. This is fortunate, for even when braiding is begun with strands of even length these grow uneven

as the braiding progresses because the worker does not keep an absolutely even tension in each. A machine would, but it must be remembered that a large part of the beauty of hand work is in slight irregularities that please the eye rather than tire it by monotony.

The ways of seaming ends of strips together are several, and the rug maker has the privilege of choice. One is to



METHOD OF JOINING STRANDS WITHOUT SEWING

overhand straight edges on the wrong side. Another is to lap ends and join with two or three stitches. A third is to seam straight edges and press open the seams. A fourth is to seam edges cut diagonally, joining the ends as if the strips themselves were bias, which probably they are not. In the third and fourth methods seams come on the wrong side, of course. In the second there is no

actual seam, as ends overlap. This is thought by some to have an advantage in flatness. In the first method there is scarcely a seam, merely a joining.

Expert rug makers differ in preference of method. Each way has its advantages and will probably be used at one time or another according to the kind of goods. For instance, textiles that fray may require the diagonal seaming; heavy goods that does not fray will be less bulky when lapped, or it may be overhanded successfully. When ends already are diagonal, material is saved by seaming as if biased. Cotton and linen lend themselves well to the plain straight seam, especially as no ironing is necessary; open the seam and press it flat with the thumb.

The chief skill in making a braided rug is in sewing the braids to insure the rug lying flat on the floor. There is one infallible way, amid various others. It can be used whatever the shape of the rug. It may be started with a tight coil for a round rug, with a loop coming at the end of a straight fold of braid, as in the oval rug, or in lengths of braid for certain rectangular rugs. After the rug is begun put this central portion, wrong side up, on a table. Lay *a few inches* more of the braid about it, and when fitted perfectly, grasp the rug and this coil of braid firmly, to prevent slipping between the distance where the sewing stopped and where the braids are held in the left hand. Turn the braids so that the two edges are uppermost and overcast them securely together with strong thread; carpet thread is advised. Any slight fulness must

be adjusted in this sewing so that it comes within the space. Again lay the rug on the table, and press it smooth with the palm of the hand. Repeat this process for all the sewing. Not only does this insure the braid fitting well and forming the correct contour, but the stitches are completely hidden between the rows, and the rug will lie flat without any tendency either to buckle or ruffle. The work progresses from right to left.

Another good way of sewing braids together is to slip the threaded needle under the strands of braids adjoining in the rug and the braid put about it. The needle must go through the textile as well as under the plait. In this method the stitches are hidden, but the danger of the new length of braid slipping remains. It is possible to become so expert in this stitchery that it is satisfactory, but it is neither so easy nor so sure as the first method described.

Still another method of sewing is to place the rug and the braid about it on the table as described, and then sew the two adjoining edges together with no attempt to hide the stitches. This method, though equally as strong as the others, is unsightly, and it prevents the rug from being truly reversible. In machine-made braided rugs the stitches are clearly visible on the wrong side. They should be invisible in handicraft rugs.

When a rug is too large to be fashioned and sewed on a table, an easy way to work is to sit on a low stool before the rug spread on the floor. Have a board across the knees. Draw the rug over this board where the sewing is to be done and work precisely as if at a table. Move

the stool along from time to time as the stitchery continues. It is wise, as soon as a rug assumes any large proportions, to leave it on the floor between times of sewing. This helps the braids to accommodate themselves to their specified coiled contours.

It is not necessary to wait until all the medium is collected or made ready before starting a rug. Plan the general scheme of colors, unless it is to be on the hit-or-miss order. Decide on the shape and when enough of the medium is ready, begin sewing. In round or oval rugs the braid may be in one continuous length, strips of material being sewed to ends of strands as needed. This is a common method of construction, and it does very well for rugs that are not large. These latter will be found easiest to manage if each row of braid is complete in itself. A new row of braid can be sewed on whenever it is the right length and in the meantime the rug can be in use.

The row-on-row braided rug is by all means the finest in workmanship. A round rug is started with a strip of braid just long enough to form a ring with practically no opening left in the center. Or it may be long enough to be coiled twice. Each succeeding row sewed to the rug is joined and finished off as if it were the final row. Each strip of braid grows longer as the circumference increases.

The oval rug is started with a straight strip of braid twice as long as required for one row. A twelve- or fourteen-inch center makes a well shaped, average size, oval rug. If doubled, the strips would be twenty-four

inches and twenty-eight inches respectively. Bring the two tips of the strip together, and seam the center edges toward the looped end. Seam the tips together to give the same shape as the loop end. About this center strip sew another strip of braid, but have the ends join on one of the sides, not at either end. Each successive row sewed to the rug is joined and finished in like manner.

There is a very excellent way of joining ends of braids so that the spot is inconspicuous. Wind a string or thread around the braid about one inch beyond the place where the braid is to be cut. This prevents its raveling. Allow from one-half to three-quarters inch of braid to overlap the end of the braid that started the row, now to be completed. Cut the braid. Weave the ends of the strands at the beginning and end of the row, by interlacing them until an uninterrupted length of braid is simulated. Each row of braid should be begun at a different spot from the preceding row, so that these finishes are distributed over the rug surface. They should never be in line.

When the rug, either oval or round, is of one continuous length of braid, the inner edge of the braid is sewed to the outer edge of the coiled, sewed rug portion. This process is continued until the rug is the size desired. In the round rug the coil to start with is so close that no hole is discernible, the tip of the braid filling in the center. In the oval rug, a strip of braid equal to the desired length of the middle of the rug is doubled back against the braid, and the adjoining edges are sewed from tip to

loop. Then the sewing begins again at the tip about which the length of braid is wound and the coiling and sewing continue the entire length of the braid until the rug is completed.

It must be remembered that the length of the center of an oval rug determines whether the rug has a tendency to be a circular or elongated oval. The shorter the center, the more accurately circular will the rug be; the longer, the more attenuated. The larger the rug, the longer should be the center, to form a well-shaped oval.

The coiled construction which is characteristic of braidwork can be carried out even when rugs are made up of squares, as in the braided rugs of carpet size which are usually so fashioned. The squares may be from ten to twenty inches on a side. Each square is complete in itself. The sections are sewed together. In Colonial times braided carpets sometimes covered entire floors. To-day this same construction is continued in some types of commercial grass rugs in which tesselation comes by sewing squares together.

To make a tesselated braided rug, start a square exactly the same as in a round rug of continuous braid. After the first row, the shaping is different. Opposite sides are pulled in toward the center. Where corners are wanted, the braid is held rather loosely so that the edges are forced out into right angles. Each row must have the corners exactly in line with those before. The larger the square gets, the easier does this shaping become. To simplify correct shaping, it is well to cut a square in pattern

size from stout Manila paper. Draw diagonal lines from corner to corner. From time to time, as the sewing of squares progresses, lay the braided portion over this pattern and see that corners come across diagonal lines. After a few squares have been so fashioned, the rug maker will find the work extremely easy, and enjoy the satisfaction of knowing it to be expert.

Another way to form square sections is to cut the braid into strips the length of one side of a square. Sew as many strips together in parallel rows as will be required to form a square. Bind with black, machine-made braid, or with wide tape. Sew the squares together so that the rows in adjoining sections come alternately horizontal and vertical. This construction pleases the eye in its effect of interlacing squares but is less satisfying technically than the first method.

A braided rug made in square sections is just the thing for a hall runner. It can be fashioned in either of the ways mentioned and the width and length be suited to the proportions of the hall. Rugs of carpet size are easily put together by joining the square sections. Having the squares in contrasting colors adds attractively to the tesselated effect. Soft colors should be used in such carpets, for a pronounced tesselation is tiresome, while subdued tones are restful.

Design motifs, such as the ogee, arrowhead, serpentine square, roundel, lozenge, lattice, etc., can be brought out effectively in some of the many styles of braided rugs. It is even possible to introduce tones of strong contrast in

such a way that when braids are sewed together there are masses of color that take on contours of design against a contrasting background. Indeed, braided rugs can be so modernistic in style that conventionalized floral and foliage motifs form borders, and medallion centers, entirely in accord with the technique of braiding, and the coiled construction inherent to their kind.

The ogee, arrowhead, and serpentine motifs are brought out in the weave and the sewing of plaited braids, correctly planned to stress the motifs. By combining one dominant color with two of neutral quality, any of the motifs can be accented. The braids should be sewed together so that the strands of strong contrast meet with as much regularity as the shape of the rug permits. Oval rugs have the advantage over round, in those of coiled construction, since, from the very start, such meeting of colors is possible, and can be continued with successful regularity, except in the place where the curves are pronounced. In rugs where straight lengths of braid are sewed together, the motifs have no such interruptions. Even in round rugs, the pattern can be readily discerned.

It is only when one strand is bright and two decidedly less colorful, or when one is light and two dark, or two light and one dark, that these designs can be brought out. When looking at a rug, blur the vision by partly closing the eyes as an artist does when viewing a picture, and the motifs will become very clear.

The most familiar design semblance that is found in braided rugs is the band of several rows of braid in con-

trast to those next it. These bands may be in solid color, or in any combination of hues that the worker fancies. When no other pattern is followed, this one should be, for it lends itself admirably to the coiled construction, and brings out color harmonies well.

A modification of this is found in the shaded rug in its several forms. In one, the entire rug is in gradations from a pale center to a very dark edge. In another, the colors are light in the center; in each succeeding band of color, one of the light strands is eliminated and a darker one substituted; thus the second band would be two light and one medium, then two medium and one light, with the next band all medium, or, if preferred, one light, one medium, and one dark. Or the bands may graduate to all dark and then suddenly start over with all light and work again to all dark. This gradation of color is continued throughout the rug until the desired size is attained.

Shaded rugs in wood browns, in greys, in old blues, sage greens, or lavenders are smart, and can be suited charmingly to decorative schemes for rooms. To further accent contrasts in these rugs an occasional single row of black may be introduced at regular intervals where changes in color are pronounced, or where gradations from dark to light and back again are followed. The black line then separates the two bands of the light.

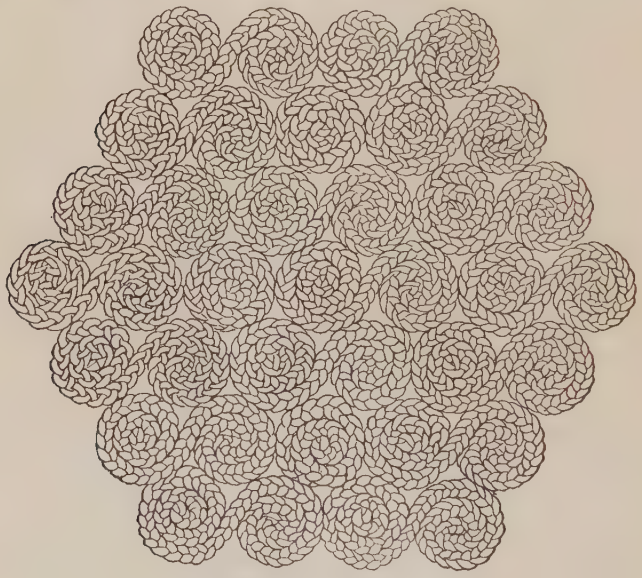
Rugs with wheel borders are old-time models. Small circles 6, 8 or 10 inches in diameter are sewed, as closely as their circular shape permits, around the edge of a round

or oval rug center. Outside this wheel border, is another of the braiding sewed in rows. When the wheels (or roundels) are in solid tones, each one matching some color found in the center braiding, and these wheels are alternated to bring out color harmonies pleasingly, the rug has added attractiveness.

A modernized version of this type of rug brings to mind the quaint box-bordered flower-beds of an old-time garden. Make the wheels of gay colors having centers of deep yellow as in the Lattice Rambler roses (page 36). They resemble modernistic flowers in full bloom. Form the field of the rug of a tan color reminiscent of soil, and put a border of green for the " box." Then add the " flowers " as close together as they can be fitted. Next comes a band of green " box " and lastly an outer band of black or dark earth-brown.

The familiar S motif found in Oriental rugs can be used instead of roundels or wheels. It is merely a double wheel or scroll. (See illustration on Plate XII.) After one roundel or wheel has been fashioned, measure off a similar length of braid and coil it in reverse of the first until the two parts meet. A classic ornament enters into such a floor covering. An entire rug can be constructed of the S unit alone used in drop pattern style. This rug has a definite appeal for rug makers, as each unit is made separately and can be " pick-up " needlework. When all units are completed they are assembled to form a hexagonal rug as shown in the illustration. This rug, like the Lattice Rambler, marks advance steps in braided rugcraft.

It will be noted that in every alternate row of the S rug a single roundel is needed to preserve the correct silhouette. The rug can have many rows and become a large floor covering, or be of few rows for a small mat.



HEXAGONAL RUG
Formed of braided *S* units

Artistry can be stressed through color in various ways. For instance, all the field can be uniform and the outermost roundels or halves of S units be of some deep color. Or the central motif can be light and succeeding rows gradually tone to a dark border row. In whatever manner color is employed, the hit-or-miss effect should be avoided.

It is wise to have the outermost roundels of some dark hue.

By combining hexagons closely fitted together, a carpet can be constructed in sections easy to manipulate. Half hexagons are fitted along ends and sides for rectangular rugs and hall runners.

Masses of color can be so worked into a braided rug of the familiar coiled formation that pattern is strikingly brought out. Every rug maker who has fashioned commonplace hit-or-miss floor coverings realizes that occasionally the same tones come together in consecutive rows and supply unexpected clusters of color. When these places are deliberately recurrent in the continuous length of braid, being introduced according to a definite scheme, the pattern will become well defined as the braid is sewed together in the rug construction. The masses of color may represent flowers and foliage with edges irregular and somewhat vague like those in Dresden silk, or the design may be more distinct in silhouette.

A pattern the size of the rug is drawn on Manila paper. The motifs should be well balanced, large and clearly outlined. Each may depict one cluster of color, and several hues be employed, or all motifs can be done in black or some one silhouette tone. Background braiding is best in some neutral shade. This is apt to form the center of the oval or round rug made in the row-on-row fashion. It is advisable in this type of rug to sew each row of braid in place when its plaiting is completed. This simplifies carrying out the pattern. Occasionally

place the rug on the pattern to see if work is progressing correctly.

While this rug has the most complicated structure of all braided floor coverings, it never transgresses the technique of the craft, but wrests therefrom the potentialities of design. For this reason it is so fully described. It is a type for skilled workers. This idea of clustering color is sometimes utilized in a minor way with great effect, however. Small splashes of color coming together in rows suggest the shimmer of sunlight through stained glass. This is brought out charmingly in table rugs in which silk, used in making the braids, enhances the sheen.

The trefoil or clover-leaf rug is one in which the shape is of special interest. It is made by joining three round rugs so that the edge of each touches that of the other two. The space that comes in the center can be filled in with braid sewed to fit the curved opening, or the space may be filled in with hooked-rug work. If spaces are small, sew hemmed burlap under them and cover with hooked work. For large spaces, trace the contour of a space onto burlap, put the goods into a hooked-rug frame and, after filling in the ground with hooked work, cut around it, allowing an edge a trifle wider than one width of braid. Adjust in the rug space, turn in the burlap and fell down on the wrong side. Sew the edges of the braided rug section down to the burlap. Another way is to bind off the burlap with braid or tape sewed so close to the hooked work that no edge of burlap shows. Then adjust in the space it is made to fit and sew securely in position.

Three oval rugs are sometimes sewed together, the center one being rather larger than those at each end. Three round rugs of equal size are also frequently sewed together. One long rug can be fashioned in either of these ways.

Rugs of carpet size can be made in round or oval shape, in the row-on-row style. During the time of making, a rug can be in use, provided enough braid is made for one entire row before the additional sewing begins, so that when it is secured in place, the rug has the appearance of completeness. One such round rug, measuring twelve feet in diameter, carpets a spacious octagonal hall of a residence situated high on a hill of Plymouth, Massachusetts. This earliest town of the Pilgrim Fathers is cited as one in which the braided rug of settler days may have originated. Therefore its use is particularly appropriate as instanced. It is the fine braided rugs of this sort that outlast many generations.

In making braided rugs, it should be remembered that a coiled construction is the most suitable. It is in character with the technique of braiding. Rugs that emphasize the beauty of their own particular technique are always the most satisfying.

V

NEEDLEWOVEN RUGS

Part I

Navajo Style

There is a curious legend that the Spider Man instructed the Navajos how to make their looms, spin and weave. The myth is full of beauty, in which the elements of nature are drawn upon in a mystical and glorified way. The top beam of the loom is designated as the Sky Cord, the lower one as the Earth Cord. The sun's rays, sheet, flash, and zigzag lightning, rain rays, rock crystal, turquoise, abalone, etc., are liberally included in the equipment and work, supplying a gorgeous conception.

There is reason to believe, however, that the Navajos learned loom-making and weaving from the Pueblo Indians, instructed in wool-weaving by the Spaniards, who brought the first sheep to Mexico. The Spaniards were experts in weaving and well acquainted with the designs of the Moors. From every angle, the origin of the Navajo blanketry, whether given by the elemental god as in the Spider Man legend or obtained in an intricate and circuitous way from the Moors, is one to stir the imagination.

A remarkable point is that no patterns seem to have been passed on from the Spaniards, who, when they

transmitted their skill in crafts elsewhere, left their stamp in design also. The homecraft rug maker cannot help being thankful that the Amerinds either failed to learn the Old World designs or wilfully refused to, for it is the barbaric quality of pattern in the gorgeous Navajo blankets which lends distinction, and it is this which the home rug maker can copy in a weave closely resembling the Navajo stitchery.

Women are the weavers of Navajo blankets, and it is not without a sense of fitness that attention is called to this fact, since the chief makers of homecraft rugs are also women, though it is hardly expected that they attend to every detail preliminary to the work, as do the Amerinds. With them, the women often own the flocks of sheep, shear and wash the wool, and put it through all processes until it comes out in the exquisite blankets of their own creation in design as well as weave. The high place the women hold in the tribe is due in large measure to their skill in this occupation.

In the Navajo needle weaving the pattern is worked directly on the warp as the actual weft. The darning stitch is the one employed. Tapestry work is well described as embroidery done on the warp threads only, in which the weft is worked in, around and about the warp. It would be difficult to find a more accurate account of Navajo blanketry weaving, or of needle weaving of this type. It is true that the Navajo women generally work the actual balls of colors in and out through the warp strands, instead of using needles, but they do occasion-

ally employ slender sticks of wood to which the weft is fastened, thereby making substitutes for needles.

The needlewoven rug maker can discard the bodkin type of needle she employs and use the balls in true Amerind style, if she prefers. The process remains the same. It is the introduction of color motifs in the independent manner of the Navajo weavers that makes the blankets impossible of accurate duplication in machine weave. It is this method and use of color in designs that gives a note of tapestry weaving of a primitive order to their textiles. Because of these very elements of crudity it is admirably suited to needlewoven rugcraft.

The whole scheme of decorative treatment in Navajo blanket rugs is in marked contrast to other accepted types which follow more on the Oriental intricacy, than Occidental simplicity. Motifs appear which are closely allied to, and apparently taken from, old Inca and Peruvian ceramics and textiles. This would be expected, as they, too, are Occidental. Amerind and Mexican basketry patterns are also reflected in the blanket motifs. Navajo designs are broad, virile, and elemental in both delineation and color.

These features are stressed in the choice antique blanket-rug, exquisite in texture and design, pictured on Plate VII. The entire field is of gorgeous bayeta. Standing out clearly against this is the simple pattern of undulating " mountain peaks " of black, outlined with greenish blue, and the central row of diamonds with threads of rich yellow interwoven. Without any false idea of being able

PLATE VI NAVAJO SADDLE BLANKET

"Individualistic" double saddle blanket of rare and unusual type. (*Collection of Charles P. Vosburgh, Cambridge, Mass.*)

PLATE VII BAYETA BLANKET RUG

A choice example of Navajo bayeta blanket rug, owned by Mr. Charles P. Vosburgh.

to reproduce such a rug, the very simplicity of the pattern is one to tempt the homecraft rug maker who considers creating a needlewoven rug in Navajo style. The double saddle blanket (Plate VI) reproduced in the colors of the original rug is of an altogether different type, although the same virility and barbaric quality pertain. It is a rug which a homecraft rug maker would hesitate to copy, but the beauty of balance in design and color well repays careful study. The significance of the pattern is involved and the design intricate. This fine example belongs to a group of Navajo blankets designated as " individualistic."

Symbolism could scarcely be absent from such design, but, as that is the basis of all units of ornament, a rug maker should feel no more hesitancy in copying motifs with what accuracy she can than in applying Oriental rug units to her own product. Where reticence should not be lacking is in the use of motifs well known to be sacred, such as the Yei, and others of the sacred sand paintings, masks, etc. These are to be avoided, as one would avoid the duplication of a prayer rug.

Designs can be taken directly from Navajo blankets or first indicated on draughting paper, each square on the paper representing one square of stitchery. If the weave is coarse, a square may indicate a single stitch, but if fine, more than one stitch may be needed, in which case, it would require two or more rows of weaving to complete a square. This is a matter of small moment, easily allowed for when weaving. (See Plate VIII.)

Many beautiful Navajo blankets have no more compli-

cated designs than a succession of stripes of different colors. Others have jagged " lightning " lines, zigzagging across the rug, sometimes in rows extending the entire length of the surface. There are endless arrangements of just the angular lines depicting " lightning."

One rug has for its main bands two contrasting shades of indigo blue across the rug, the light in fine lines. Through the center of each wide dark band is a line of deep yellow from selvage to selvage. The blue bands are separated at intervals by narrower bands composed of red and white.

The diamond medallion, having two smaller diamonds cutting off each lengthwise extremity, is a familiar pattern. Squares and triangles are also much used. Serrated peaks represent mountains, while squares may mean the four quarters of the globe, the four winds, or the four points of the compass, all of which are synonymous to the Amerind. Eight parallel black lines, vertically placed, indicate rain. The diamond may mean a page for documentary purposes, or a slingshot. The swastika is frequently found, and there is no reason to believe it to have any but its regular significance of good luck and happiness. Some of the Occidental geometric motifs are identical with those of the Orient, but this is to be expected, as all peoples have combined lines to produce such figures. It will be seen from the foregoing that the motifs have a primitive simplicity, easy to reproduce.

It was not until long after the origin of the blanket itself that color was introduced, the first ones being of

plain white wool, with nothing outstanding to recommend them. These textiles are not recalled when Navajo blankets are now considered, but the finely woven fabrics with colors, vivid and gorgeous, bold in design and pure in tone.

Black and white are lavishly used with the color that is unchanged as it comes directly from the sheep. A grey mixture of the two is much in evidence. Next in frequency is red, both with the brilliant cochineal and the peculiar brownish red of dye from brazil-wood. Indigo blue in various depths of tone is as often found. A soft brown in light and dark shades constantly appears, and green is not lacking. In the "Innovation Blanket" of Germantown wool, colors are more variegated, but it is well for the home rug maker to stress the type in its purity, even when this yarn is the medium. The name "Innovation Blanket" was applied to the Navajo blankets when first this yarn was used in their making. It is a term well suited to homecraft needlewoven rugs in Navajo style, which are sufficiently different from other rugs in that category to be considered themselves innovations. Only a life-long devotion to the rug making equal to that of the Amerind women would insure the same degree of perfection, but duplication of equipment and medium used in like stitchery is not impossible.

Color is as significant as design in the Navajo art. Red typifies the sun in its glory; yellow the west of the setting sun; black is the color of the north; and blue of the south. These latter also denote male and female, vigor and gen-

tleness. Colors in combination acquire new meaning in design.

Red deserves more than a passing comment, as it is the color which in the bayeta blanket is responsible for its name. So precious was this originally, that a blanket in which even a little appeared, took its name therefrom, which custom remains to this day.

A point of interest to the homecraft rug maker is that the color was secured from strands of a previously woven fabric, called baise, or, in Spanish, *bayeta*. It was variously reputed to have come to America from Turkey, Spain, and England, via Spain. This much-prized woolen cloth resembles flannel, and the dye which gave it its particular color was acquired from two sources: brazil-wood and cochineal. It is said that the word "brazil" is responsible for the naming of Brazil by the King of Portugal, because *bressil* wood was found there, though previously considered exclusively an Oriental product.

The bayeta cloth was not cut into strips, as are rag rug strands, but was carefully unraveled and the thread rewoven into the Navajo textiles. The fabric was costly, an imported luxury to be used sparingly. The present fashion for raveling out old sweaters, scarfs, parts of worn carpets, etc., is reminiscent of the same proceeding in the making of bayeta blankets.

Those who use rags in the making of their needle-woven Navajo rugs will be fortunate if they have some old red flannel petticoats to cut up. If not, a flannel of the same sort would be right for the gayest red. For mod-

ern decorative schemes it is well to use it with reserve, not because of its expense or scarcity, as was the reason with the Amerinds, but purely because it is too gaudy for the present ideas in floor coverings. The shade should enliven, but not predominate. The brownish red of the brazil-wood dye can be introduced with more freedom.

Germantown yarn is the medium, *par excellence* for these rugs, as it is identical with that used in the genuine Navajo " Innovation Blankets." For the purpose of quick work, similar wool yarns in rug sizes are advised, a coarser weave being the only result and difference. Candlewick is a good substitute, although it is cotton. Roving belongs to the same type of medium. Rope jute which is lightly twisted, being a jute roving, can be used successfully for porch needlewoven rugs. Rags and stockings cut into sizes approximating the rug yarns may also be used; but if they are, the rugs automatically become rag rugs in Navajo style, belonging as truthfully to that group as to the needlewoven rugs.

There are two methods of needle weaving in Navajo style. In one the work progresses in consecutive rows from selvage to selvage, each color being introduced as called for in the row of the pattern being followed. It is so that the Navajo women weave their blankets. The second method is to weave in the motifs first, and then work in the background. The first method is advised.

It is wise in these needlewoven rugs, as in those in the Colonial rag rug type, to put in several rows of the " indifferent weft," though but one inch will be sufficient,

for no fringe has to be allowed for. This weft is battened down firmly, and against it a narrow "web" is packed. This need be but a very few rows deep. The extra length of warp at each end of the rug when the "indifferent weft" is raveled out, allows for knots to be tied easily in couples, as in the Colonial type. The loose warp ends should then be cut short. In the "Innovation Blankets" that are made to fill the demand for blanket rugs, fringe is added, but it is made from the rug yarn, and not from the warp.

Because the Navajo textile is a blanket made use of as a rug, it has slight differences in weave from that accepted for rugs in general. For example, there is no fringe, except in the "Innovation Blanket," the medium being the same throughout the entire length. A fringed *blanket* is an anomaly, as also is one with a heading. The presence of these features announces that the blanket is really intended for a rug. Then are they indeed "innovations" rightly named. The needlewoven-rug maker has the privilege of choice in making her rugs, those with plain ends being of the regulation type and the fringed ones of the "innovation" order.

In any event, when the rugs are intended for floor coverings it is desirable to weave in a few rows of the doubled warp, as in Colonial rag rug weaving. This web is a protection to the finer medium used in the rug surface.

The needlewoven stitch is the same as described for Colonial rag rugs, namely, that of darning. The work

progresses in routine manner until design is introduced, which may not be until quite a strip of weaving has been completed, since many Navajo blankets have no border whatsoever. As soon as a row comes in which color-work starts, each unit of color is looked upon as a separate entity, and is needlewoven without regard to another. It is well to have as many needles threaded with color as there are color units in the row to be woven. These needlefuls should be long enough to " step in " a small unit of color which may extend through several rows of weft, or they should be as long as the weaver can manipulate readily if the unit is large in the design being copied.

When a contrasting color is started, the end of the new medium is caught in a loop made in the end of the preceding strand. This small loop is made to prevent the stitches already taken from raveling out; it serves the double purpose of securing the tip of the contrasting colored medium also, as mentioned. The end of the discarded medium is left hanging on the right side of the rug surface, and the tip of the contrasting color may also be left sticking out. (See Navajo rug, Plate VIII.)

When each new color is introduced, it is begun and ended in precisely the same way, so that when a row of weft has been needlewoven, there remain as many loose ends as there are colors so woven in. Sometimes there will be twenty or thirty, or even more of these loose ends visible in a single row of a Navajo blanket in the process of weaving. Dexterity in starting and ending colors in this

looped fashion is soon gained, and the weaving becomes an interesting work.

A color is brought up into a succeeding row of weaving by " stepping." This is done by drawing the medium about the warp in the upper row and through the loop of the color strand being discarded. Continue the weaving in this upper weft row until this color in turn is discarded for a new one. Then introduce the next color and continue as before. When there is a discrepancy of more than a few stitches in consecutive rows of weaving, caused by the exigencies of the design, a new needleful of color should be started instead of " stepping " the color.

When a rug pattern is " stepped in " first and the background woven in about it later, the method of work is similar. The rows of pattern should not be battened down tight before the rows of weaving are complete, for the background medium must be run through the loops at ends of design stitchery, as it is " stepped " into the row above. When each few rows of background have been filled in, the entire width of weft should be battened down as tight as possible. It will be seen that the battening down is simpler in the row-by-row weaving previously described. The Navajos are continually battening down their blankets. So tight is the weft sometimes, that the blankets are impervious to water.

To insure a design working out according to a pattern, each warp strand holder should be numbered on the beam. The motifs must be calculated to fill definite spaces, and must be begun and completed within the

number of warp strands that correspond with the vertical lines in the draughting paper on which the pattern is made. Lines can be drawn and numbered on the stretchers to correspond with the horizontal crosslines on the paper, and absolute accuracy be gained, as in taking off cross stitch patterns by counted stitches. In the row-by-row weaving marking the stretchers can be omitted, though beams should be marked.

If a fringe is to be made, use six or more strands of yarn twice the length desired for the fringe. Double through the center, and pull the loop through an interstice formed when two strands of the warp are tied together close to the rug to hold the weft firm. Draw the ends of the yarn through this loop and pull tight. Repeat in each interstice. Smooth the fringe so made on a table, or the floor, and cut the ends even.

It is well to remember that the Navajos weave blankets primarily. The name has become so deep-rooted that, even when they make actual rugs in response to the insistent demand, the name remains. The blankets, like ancient tapestries and cross stitch carpets, were originally used for many purposes. They were wrapped about the body as sleeping blankets, hung before the openings to wigwams and hogans in lieu of doors (a use in accord with ancient Oriental custom also), and spread on the ground like carpets, etc. The extra-heavy blankets, not the soft pliable ones, suit the last purpose now, as then.

From this it is also apparent that the blankets, especially in the very soft, fine weaves, make wall hangings of

startling decorative beauty. Navajo saddle blankets are used with great effect as table covers. Needlewoven reproductions, therefore, find many uses, and each in character with the original object of cover, carpet, and hanging.

Part II

Colonial Rag Rug

The needlewoven rug, Navajo or Colonial, piques the interest of rug makers. It occupies a place by itself, partaking of the inherent elements of embroidery, tapestry and weaving, yet without entering into any of the classifications sufficiently to be included without reservation. Therefore it has acquired the descriptive name of needlewoven rug.

In the name is disclosed the tool of construction and the method of making, together with a clue as to the necessary equipment, for a woven textile involves a loom, however crude. In this instance the loom must be such that the textile made thereon can be fashioned with a needle rather than a shuttle, and the technique of the stitchery must reproduce weaving in its simplified form. On the earliest looms such stitchery was used.

It is not essential that we revert to the type of loom used in prehistoric times, which had but one piece of wood in its framework. On this branch or stick, one end

of each long strand of warp was wound and tied securely. When this single "beam" had been sufficiently warped, the loose ends of the strands were brought together and wound about the body of the weaver, or about some tree-trunk or stick of wood thrust firmly into the ground. The weft strands were run through and about those of the warp, by the fingers or by some sort of needle. Such looms are not entirely abandoned, for in some parts of the globe natives continue to use them.

In a later primitive loom two "beams" were used, one for each end of the warp. These were so heavy and so suspended from a sapling, cut down and placed horizontally in the crotches of two nearby trees, that the warp was kept taut. Such looms warped with more complexity remain in use among native weavers both in the Orient and the Occident. Many of our choicest Oriental rugs are woven and knot tied on looms of this sort, as also are the famous Navajo blanket rugs of the Western hemisphere.

It is on looms of like simplicity that needlewoven rugs are made. The looms are like hooked-rug frames, except that the top and bottom sticks of wood (the carriers) are indented or otherwise marked off with pegs or tacks. Through or around these fastenings, equally spaced, the warp is wound. The side pieces, "spreaders," hold the "carriers" immovably apart, so that the warp keeps taut. These are called frame looms because they actually are frames. Any hooked-rug frames of sufficient size can be fitted with warp holders and become frame looms.

All looms are constructed on the same principles, the

mechanism gradually becoming more intricate until the monstrous looms in carpet factories and mills have resulted. Early in the evolution came the hand loom, with its shuttle, and somewhat later the loom, manipulated by the feet as well as the hands, although the weaving itself was all handwork. A shuttle took the place of the needle. The name by which this loom is known in America is the Colonial loom.

The floor coverings made on these looms of early settlers are among the first that carpeted the homes of these people, antedating hooked, crocheted, and various other kinds. The name Colonial rag rugs has fastened itself aptly upon them. When made in lengths laid side by side, whole rooms were covered with Colonial rag carpeting, a distinctly handicraft floor covering.

Rugs of this sort come under the heading of loom-woven, rather than needlewoven, rugs, but they are touched upon here, because nowhere else are they discussed in this treatise on homecraft floor coverings. The size of these Colonial looms is so great, and their shape so ungainly, that one could not be housed in every dwelling, nor could space always be devoted to it even if the home were large. Considering this and the cost of the loom, the difficulty in setting it up, and the fact that the warping is such a circumstance that even expert weavers elect to send to some nearby mill to have the looms warped, for the economy of both time and warp, it seems to put this type of rug weaving in a class entirely by itself, as indeed it is so considered.

In this book those rugs are discussed that can be made within the limitations of any home. They require no equipment larger than can be accommodated readily within the confines of any house or apartment, however small. A hooked rug or needlewoven rug frame loom is the largest article of equipment necessitated and no tool is larger than a crochet needle or rug hook.

A word about some of the smaller looms may not be amiss. There are on the market to-day many excellent handicraft types that go under the name of table looms. In them the warp is wound on enormous spools, thereby minimizing the space otherwise needed. A few models may be used in rugcraft, when rugs are very small or are made in narrow runner form. The directions for warping these looms come with them, and as there are many models, it would be useless to attempt to give directions here. The rug weaving on them can be done according to the method described for frame loom rugs.

On these table looms it is possible, by seaming breadths together, to make wide rugs in strip formation, with rags in Colonial type, or with chenille for rugs bearing this name, or with candlewicking, Germantown yarn, or rug yarn for Amerind rugs. Rags are sometimes requisitioned for the latter. As Navajo blankets are seamless, the strip-woven rugs would not reproduce them, satisfactorily. The Chimayo blankets, much like Navajos, do have seams, however.

Two distinct kinds of needlewoven rugs can be made on the simple frame loom — the Colonial rag rug, and

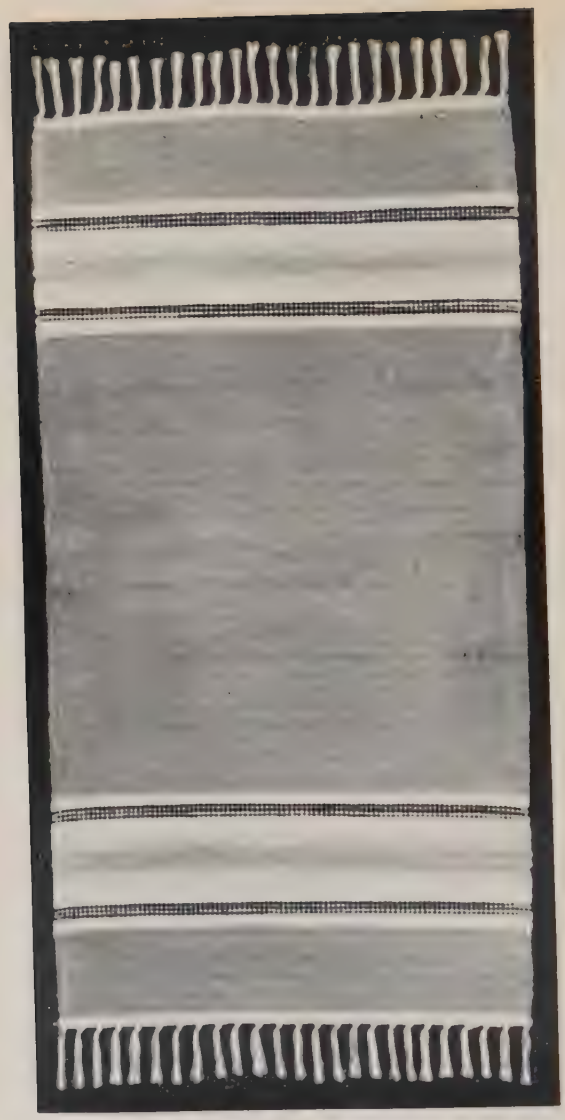
those in the style of the Navajo blankets. Any suitable weaving medium may be used and the rug acquire thereby a name, chenille rug, candlewick rug, jute rug, etc. Or if a weaver becomes very dexterous, and introduces designs, names can be acquired thus also, as the bat rug, a well-known design of Colonial loom weaving. In all, the weaving is precisely that of darning, in which the needle carries the weft medium over and under warp strands. So different are the results in the Colonial and in the Navajo rugs that in the first a plain weave is found, while in the second, elements of tapestry weaving are distinctly apparent.

It is interesting to note that these elements are beginning to be incorporated into a novelty type of Colonial rug. These are usually in bold floral patterns and are called tapestry rag rugs. They are totally unlike Navajo blanket rugs, although the method of introducing color is quite similar. The Navajo rugs are reversible, being identical on both sides. The tapestry rag rugs are not. This is in part due to the coarseness of the rag strands and partly to the method of weaving. Each color is woven back and forth, making loops where the turns come. These are always on the wrong side and visible. They are also noticeable to the tread although they flatten down with wear. By following the Navajo methods of weaving, reversible tapestry rugs, minus these characteristics, can be fashioned on frame looms.

The equipment for making a needlewoven rug consists of a frame loom, one or more needles, and a weaver's

PLATE VIII TWO NEEDLEWOVEN RUGS AS SET UP

A, Navajo blanket rug, with characteristic battlement and hour-glass motifs, to be used in repetition throughout. *B*, Colonial rag rug, showing methods of introducing color. (*Samplers executed by the Author.*)



Courtesy, Dennison Mfg. Co.

PLATE IX COLONIAL WOVEN RUG

The simplicity of this familiar design gives it a certain dignity.

comb. The needles may be bodkins, hammock needles, or slender tapering sticks of wood having holes for eyes made near the ends that are straight. These wooden needles should be sandpapered to make them smooth. An ordinary coarse comb of metal, bone, or composition may be substituted for the weaver's comb, if the latter is not obtainable. A furrier's comb, having coarse teeth, is strong. It should have dull ends to the teeth, not sharp tips. Whatever the type of comb used, the teeth must not be sharp.

A heddle is an advantage to a rug maker. This corresponds to the " heald-rod " used by Oriental and Occidental rug weavers and is used to bring forward alternate strands in a row of warp, so that a space is made for the easy passage of the medium. By reversing the order of the warp strands for every other row of weft, the correct " shed " is immediately formed through which a number of darning stitches can be taken simultaneously. In some instances frame looms come with " heddles " of one sort or another.

Besides the various kinds of frame looms that are on the market, the rug maker can fashion one for herself if she so chooses. There are several types easy of construction. Directions for making them and for warping the different models are given.

A frame loom can be made of four strips of wood with corners mortised precisely, as in a hooked rug frame; or a hooked rug frame can be transformed into a frame loom with very little trouble. If the frame is made ex-

pressly for weaving, use the narrow side — that is, the edge of the two short strips — for the top or surface of the " beams," as the top and bottom pieces are now called. These are known in the hooked rug frame as the " carriers." The surface of the beams should be indented every one-quarter or one-half inch. These incisions should be about one-eighth inch wide to take the coarse carpet warp.

Although there is no prescribed size, a satisfactory one for a rug frame loom is forty-two by sixty inches. The strips are of five-eighths by one and three-quarters inch boards. The long strips are " stretchers," as in a hooked rug frame. Each of the short strips should have the indentations on one of its narrow sides. When notched, these two strips resemble dental moldings.

If a hooked rug frame is used, the warp holder may be of round-headed tacks or of double-pointed ones which have the distances between the two tips either one-quarter or one-half inch. These should be hammered into the carriers so that the space between each round-headed tack or the tips of the double-headed tacks should be exactly one-quarter or one-half inch, according to the distance desired between the warp strands.

When the frame loom is set up it is ready to be warped. Coarse cotton warp, the cotton cord used in making hammocks, or any cotton or linen twine of carpet-warp size can be used. The Navajos warp with wool, but this is not used for needlewoven rugs. One end of a length of the warp is laced through the teeth of the indented warp

holders or about the tacks, and the warp is then brought from the first indentation across the loom to the corresponding indentation; around the first tooth and the frame, so that it can be run through the second indentation; then across the loom to the second indentation; about the frame and through the first indentation again. Repeat the process over the same route, so that there are double warp strands across the loom from the first and second indentations. This makes the edges of the rug especially strong.

When the warp reaches the beam where the warping began, after this double warping is completed, it will come through the second indentation. Wind it about the second tooth and down through the third indentation, across the loom and through the corresponding third indentation on the lower beam; around the third tooth and up as before; and so continue weaving the warp up and down through consecutive indentations and about the teeth in like manner, until the entire loom is covered with warp strands, spaced with exact precision. The last two warp strands should be doubled by lacing the warp back over them again as in the beginning. The warp strand should then be cut and the end laced through the teeth, securing it firmly.

To hold the warp doubly secure, the strand may be taken about the lower beam as well as each tooth, as done at first. The only difference in warping the loom with the tack warp holders is that the warp is taken about the tacks instead of through the indentations. If the heads

of the tacks are not too tiny, the warp cannot pull off. When warping the frame fitted with double-point tacks, the warp will have to be threaded through the tacks as well as about them, which is not quite as easy as in either of the other arrangements. The two matters of importance are to have the warp strands run in parallel vertical strands across the loom, and to have them correctly spaced. They must be taut but not strained.

When the loom is warped, the weaving can be commenced. All articles needed should be assembled, the comb for battening down the weft, the needles of whatever sort chosen, scissors, the pattern and the medium in colors required, together with extra warp for making the improvised tenterhooks.

The needlewoven rug in Colonial rag rug style is made with a cotton warp generally, linen being costly. It may be in unbleached (natural) tone, or in some fancy hue, such as blue, red, green, etc., or be multicolored. When the loom is warped, the threaded needle is run in darning stitch from one side of the loom to the other, over and under each alternate warp strand, using the weft medium called for in the special part of the weaving being done. The work may progress from one end of the rug to the other, the final part being a duplicate of the weaving at the beginning of the rug. Or half the rug may be woven, the loom reversed, and the opposite end then be woven to meet the first half. Both are accepted methods.

The weft is rags, cut or torn as for hooked rugs. The

width chosen depends on the closeness of the warp (one-quarter to one-half inch apart), influenced by the weaver's preference. Narrow weft may be employed even on the one-half inch warp. The rag strands should be anywhere from one-quarter to one inch wide. Heavy textiles should be cut narrower than the accepted width or thin goods wider, for there must be a uniformity of sizes in strands used together. The width of strips must be determined upon before the strands are made ready and all conform to the thickness of the size chosen.

The first three and one-half inches of weaving may be in any kind of medium. It must be closely packed down by pressing (battening) down with the comb. This forms a firm support for the rest of the weaving. After the first rows of this indifferent weft there should be a strip of weaving from one to one and one-half inches deep which is technically known as the "web" or heading and in which the warp medium in double strands is used as weft also. The weaving is started by looping the weft about the first two warp strands nearest the edge and then carrying it back and forth from one selvage side to the other in weaving stitches. Each row of weft goes over and under the warp in reverse order in consecutive rows as in darning a hole.

When the weaving has been entirely completed, whether woven from end to end of the rug, or by halves, first from one end and then from the other, the final weaving coming in the middle of the rug, the rug is ready to be taken from the frame. Should there be any loose

ends of weft, it is advisable to lace them in through the stitches first. Then cut the warp where it goes about the warp holders and the textile is released.

Ravel out the three and one-half inches of weft at each end until the "web" is reached. This remains intact. Tie each two warp strands together so that the knot presses up against the "web" firmly. The warp ends form a fringe which may be knotted again, combed out, or left as it is for time and wear to untwist. Smooth out the fringe on a table or the floor, and cut the tips of strands to make all of equal length.

Examine the weave, and if there are any places where the weaving is not close and firm, spread the weft with a bodkin until symmetry is gained. Great care must be taken with the center of the rug, when the weaving is done from ends to center, to insure a close texture. The Navajo weavers are said to spend almost as much time in weaving in the central weft row as that required for quarter or half the entire surface.

There are certain knacks in weaving that are helpful to know and which should be followed. For instance, the weaver must exercise care not to draw the weft strands tight, for this pulls in the warp and narrows the rug. A close weave is not made thus, but by pressing down the rows frequently with the comb. This must be done across the entire width of the rug. The harder the rows are pressed together, the more expert the craftsmanship will be. This process is called "battening down" the weft.

As the weaving progresses, occasionally insert a short

length of the warp medium through the rug close to the selvage, and tie it about the "spreader" of the frame loom. This acts like a tenterhook and holds the textile straight. There should always be two such substitutes for tenterhooks, one put through each opposite selvage in the same row of weaving, so that the pull between them will be even.

To instil variety in rugs a band of solid color may be woven in each end of the textile, just above several rows of the field medium. These bands form rug borders which may be used to accent a desired color scheme. A field in hit-or-miss weave is neutral, and such bands add character. It is possible, however, by having some one color used more frequently than another in the variegated hit-or-miss weaving to secure, in this neutral ground, a tendency toward any special color desired. A row or two of black inserted each side of a border, even though it be but a "pin line," supplies another note of decoration. Fields are sometimes in one flat color with bands of a contrasting hue woven in for borders. Three borders, two narrow ones each side of a wide one and none far apart, give another different ornamental effect.

Suggestions of pattern may be wrought in the weave of a Colonial rag rug. For instance, the crow's-foot or arrowhead design can be an embellishment for a border. It is made as follows: With a needle threaded with black or some dark, strongly contrasting hue, take a stitch diagonally across a stitch or square in row of weft just inserted, starting the stitch from the right-hand selvage.

Bring the needle up at a distance so spaced that the reverse side of the rug also has a like diagonal stitch going forward, but at a different slant. Were the textile transparent these stitches would show as a zigzag or meander across the weft from one selvage to the other.

In the next row the stitches join these, but in opposite direction, so that a horizontal V is formed. The resemblance of this shape to an arrowhead is immediately seen. After several rows are thus woven a faint semblance to a crow's-foot is responsible for this name.

These diagonal stitches must be put in just after each row of weft has been woven, over which the stitches are to be taken. The battening down of the weft should be so hard that it would be difficult to thus embroider the pattern afterwards. The facility with which the pattern can be made, however, is such that no amateur need hesitate to work it.

Other simple patterns, such as appear on Colonial rag rugs, may be used. In the Colonial rug pictured on the frame in the process of weaving (Plate VIII) five ways of introducing color through design are shown:

1. The lines inclosing the arrowhead border are in straight weaving of a contrasting tone.

2. The arrowheads themselves are threaded over a foundation of weft.

3. The broken lines are of short strands, each overlaying its length of woven foundation. By wrapping a strand around its length of weft, the pattern can be made to appear on both sides of the rug.

4. The medallion is " stepped " in the weave.

5. The initial is worked with tapestry yarn in cross stitch. Each section of weft, between its inclosing warp, is counted as one square.

This is a bath mat, which, when completed, will be twice the length of the loom, as the warp is threaded *around* the frame. When the lower warp strands are cut, the woven part is drawn to the back of the loom, and the warp re-positioned and secured for the completion of the weaving. The Navajo rug illustrated on its frame is to be so treated to increase its length. It will be seen that, by such manipulation of the warp, a comparatively small frame loom becomes adequate to rugcraft.

VI

KNIT RUGS OF SMOOTH-FACE AND PILE SURFACES

Part I

Historical Background

Few persons appreciate the latent possibilities of knit rugs in the field of handmade floor coverings. This is evidenced in the paucity of handsome knit rugs, old or new, and by the reluctance of rug makers to use knitting for this purpose. That there can be genuine artistry in knit rugs when developed to their highest, and that even the simpler types can have the charm of peasant or folk art, will be made apparent.

Though the knit rug is of comparatively modern times, the craft itself is so linked with mythology and history as to be accounted by some to be of antediluvian origin. The fact that it requires only the primitive equipment of two sticks is consistent with the supposition; and the theory that the nuptial garment, made by Penelope during the three years of Ulysses' absence, was knit, is not without possible foundation, though the tale is but legend. How else could she have undone at night what she spent her days in "weaving"? It is held impossible to ravel loom-woven goods faster than it is constructed, though such is easily possible with knitted fabrics.

This raveling quality may be responsible in large part for the scarcity of old knit rugs. Indeed, the fact that no knit articles of antiquity are extant may be due to this, and it can hardly be argued as proof that they never existed, since the rent, found in all other ancient materials, would have meant entire destruction to knitted goods.

With what care have the articles knitted by Marie Antoinette been treasured! In her day gentlemen of rank ran knitting-looms, and ladies of high station pursued the craft by hand. It was considered a badge of distinction to wear a miniature silver knitting-needle, suspended from a chain about the neck. Such was the prestige given knitting by court favor. Since rug making has always been preeminently woman's work, it is fortunate that knitted rugs have remained hand-work, without entering into loom production. This is worthy of note for its very uniqueness. In all other crafts, except crocheting, the field has been stormed by machine-made products.

We may owe it in part to Queen Elizabeth that such is the case, for she it was who denied a patent to the first knitting-machine. The modern flavor of her answer makes it worthy of quotation. "Had Mr. Lee made a machine that would have made *silk* stockings, I think I should have been somewhat justified in granting him a patent!" Deeper than this was the thought of its depriving many subjects of work.

Although the current tale that knitting was introduced into England through the Spanish sailors at the time of the Armada has been disproved by the fact that knitting

is mentioned in Act of Parliament one hundred years prior to the time (1488–1588), this does not alter the truth that Spain was the channel through which knitting came to England, and thence to America. Some of the very finest knitting patterns existent are those which the inhabitants of the Faire[1] Isles learned from the shipwrecked Spanish sailors who sought refuge there. Such patterns have retained their distinction through the centuries and come as a rich heritage to the rug makers of to-day. They bear little resemblance to other plainer patterns, found elsewhere in England, and clearly show Moorish tendencies; and quite naturally so, as the Spaniards learned knitting from the Moors.

It seems odd that craftsmen have not more generally employed these Oriental motifs which are veritable ancient knitting patterns with the dignity and character suited to rug making. No difficulty arises in using them, for they are brought out in knitting stitchery, and require no technical adaptation. In them, one is forcibly reminded of the Amerind blanket-rugs of the Navajos, who also are indebted to the Spaniards, (hence the Moors) for much of their knowledge. When these are developed in rugs of flat weave there is that concord of pattern and method which is stressed by all true craftsmen. The type of knitting from the Faire Isles is minus pile, though pile can be effectively introduced into it if one desires to emulate an altogether modern style of knitting.

No exact date can be ascribed to the introduction of pile

[1] Faire comes from the Norse *Faar* meaning *Sheep*.

into plain knitting. There is a theory that it was through the desire to copy "Turkey work," especially in rug making, that it was devised. In any event, it is the rugs of pile knitting that hold highest rank to-day in this particular craft. Their superiority dates back to 1876, when carpet ravelings were recommended for the medium.

Knit rugs made their appearance in the latter part of the eighteenth and early years of the nineteenth centuries. Unfortunately this was not an era of exquisite homecraft rugs, but of practical folk-art floor coverings. This is undoubtedly why the knit rugs that have come to us through the intervening years stress the practical rather than the ornamental. This should not act as a barrier to present-day development of knit rugs into carpets of decorative value. With a better understanding of the craft and its powers, a fresh stimulus should be gained.

No more elaborate equipment for knitting rugs is required than two pointed round sticks, or skewers, which were originally used. The reversible needle, now always found in steel knitting-needles, and the wooden and bone composition needle with ball tip at one end to prevent the work from slipping off, were later acquisitions. Some of these needles have finely carved knobs, as one pair, which it is the good fortune of the writer to own, gives proof. They are made from the ivory of a whale's tooth and were carved by some sailor to while away the tedium of a long voyage.

Neither the double pointing nor the addition of knobs to the needles in any manner alters the mechanical na-

ture of the tool, which from the first was perfect for the craft. In rug making, large needles are used in accord with the coarse medium. They may be of steel, and therefore reversible, of wood, or of composition with the knob ends. Wooden needles are a popular choice. They come in extra-large sizes and are strong and flexible. The largest steel needles are best suited to pile knitting. The needles of corresponding size in wood or composition have a tendency to bend slightly under the weight of work not done in zephyrs. Except in pile rugs, the medium is generally strands of cloth.

Elasticity is a quality inherent in knitting, and it should be understood at the very start that this elasticity is something to cope with. It must be turned to advantage, as indeed it is in certain types of rug, and it must be handled dexterously in other types in order to get results thoroughly satisfactory.

It is also possible to make good use of the seemingly destructive raveling trait in knitting — that is, in the rectifying of mistakes that pass without detection when raveled and reknit, and especially in the raveling and re-using of yarns from old scarfs, sweaters and other knit garments that have outlasted their usefulness. There is great economy in this salvaging of rug materials, which, when reknit, have every appearance of being fresh from the skein.

The prevention of raveling when not desired is essential and can be simply accomplished by fastening the end of the thread securely. This is done by drawing it through

the last loop, as in crocheting, and interlacing the end through the knitted stitchery. Incidentally this also conceals the end of the medium.

Part II

Methods of Making

The stitch of the knit rug is simplicity itself. It is always the plain one called "garter stitch" because so universally employed in making the earliest type of garters. The amazing thing is that with it both smooth-face and pile surfaces can be constructed, each in various effects, so that rugs of totally different styles result. Moreover so little medium does regulation knitting require that smooth-face rugs call for less material than do most floor coverings in other crafts. Economy is stressed with no sacrifice of beauty. These are points to appeal to a rug maker.

Rugs knit with a pile hold highest rank, although they take more material than smooth-face. These pile rugs fall into two classes according to their methods of construction, namely Smyrna and ravel pile rugs. The Smyrna are patricians in knit carpets. They are counted among the most exquisite of homecraft floor coverings. Hence they rightfully deserve first consideration. They take their name from Oriental Smyrna carpets which are their prototypes.

There was a time when all Eastern floor coverings with a pile were indiscriminately called Smyrna rugs, as, at an earlier period, they were termed "Turkey Carpets." About the middle of the nineteenth century, when this transition of nomenclature was recognized, Smyrna knit rugs came into the prestige they hold to-day. It was also about this time that machine-made reproductions of Oriental Smyrna rugs were introduced. These domestic rugs fell so far short of the originals that the name fell into disfavor for many years except in connection with handicraft.

While the name Smyrna rug was so comprehensive that it included all knot floor coverings from that port of shipment, there is a specific knot carpet that correctly falls into this classification. This has certain characteristics which may well be cited, for they are found also in Smyrna knit floor coverings. These characteristics are a loose weave; coarse wools; Turkish motifs with no prescribed arrangement in field or border, and no restrictions as to color, although blues, reds and greens predominate. The use of the last-named color accords with the heterogeneous traits, for in Turkish rugs green is seldom found, it being held sacred, and hence not to be trod upon. The blues, especially favored by Armenians, and red by Turks, are naturally in evidence.

When Smyrna knit rugs are correctly worked to carry out the Oriental characteristics in pattern and color, and are wrought in yarns, deftly sheared to give a surface of exquisite texture, they are rugs of real luxury and beauty.

They have then earned the right to be classified by a name of such distinction.

The fact that they are made of yarn pile does not necessarily imply that they are costly rugs to make, for, as previously suggested, the yarn may already have served a purpose. Small quantities of yarn, fine or coarse, can thriftily be employed, but they must be introduced into the design as if to fill a need without suggesting economy as an object.

It is when pile knitting is avowedly thrifty that its name immediately betrays its inferior character. No longer does it presume to be classed with Oriental floor coverings. The rugs, instead of being called Smyrna, then go by the commonplace name of " string rugs." This term is descriptive not only of the foundation medium, but of the pile that may be oddments of yarn, wisps of cloth, etc., which are mere slivers and strings of stuff, introduced hit-or-miss style. The wearing quality may be equal to that of the Smyrna, but the rugs are totally lacking in distinction, unless perchance, designs and colors are Oriental. In such an instance these characteristics are in themselves sufficient to make the name Smyrna rug not altogether inconsistent for this rag rug variety.

There is no difficulty in adapting patterns on Oriental rugs to Smyrna knitting. On architect's draughting paper indicate the stitches exactly as when copying cross-stitch patterns. For the border take some simple border motif and use it in repetition, varying the colors when working; or employ two or more motifs in combination. Narrow

strips of black or dark brown, knit separately, can be introduced between patterned border strips. For the field of the rug, copy a few field motifs and scatter them through the knitting against a background of blue, dark Oriental red, tan or some typical Oriental field color.

Cross stitch, filet, and beadwork patterns can be carried out successfully in rug knitting of this sort, provided the designs are applicable to floor coverings. Designs from textiles can be copied also, and those from Oriental rug books, Persian and Indian embroideries, etc.

Oddly enough, knit rugs have always had a tendency in America to keep to small sizes. There is really no reason for such a restriction. In Italy, that country from which so much knitting has emanated, knit carpets are frequently found in such large sizes that they completely cover the floors of spacious rooms. There, to-day, carpet and rug designs are to be had, with wools selected and directions supplied for making, exactly as tapestry-work patterns and materials are procurable here. The carpets are made in breadths of Smyrna knitting. These are seamed together by counted rows, as Brussels or other pile-woven carpets, thus insuring matching of patterns. These carpets are durable and luxuriously soft to the tread, since excellent yarn is employed for the pile. When colors are pleasing and correct, and designs well suited, these deep-pile, handicraft carpets are indeed handsome.

Knit pile as found in Smyrna or " string rugs " is made in three different ways. It may be knot-knit, laid-in, or loop-knit. The first two ways call for pile of a secondary

medium cut into short working lengths, each making one stitch. The last-named pile is made of a continuous strand which may be of the foundation medium or a secondary one. Shorter strands may be employed if a design is carried out in the loop knitting, or if a secondary medium should happen to come in short lengths. For rugcraft it is unwise to have the knitting medium and the pile medium identical, as the rug surface should be soft and the foundation stout.

The knitting medium may be insignificant, such as twine (that is not wirey, however); strong string; very coarse knitting or crochet cotton; carpet warp; jute yarn; etc. Since it does not show, the essential quality is durability. The expert worker suits her foundation medium to the pile she employs so that the sizes are relatively correct.

The pile may be yarn or textile. Yarn is cut into strands two inches long or some multiple of two inches, so that it can be doubled to make working strands of this length. The finer the yarn the more beautiful the surface of the rug will be after it is sheared and tips of yarn only (no loops) remain. Textile (rag) strands are cut one and one-half inches long and one-half inch wide for laid-in pile, and two inches long for knot-knit pile. It must always be remembered that weight of goods influences widths of strands. Therefore heavy textiles would be cut narrower, and sheer goods wider to conform to the one-half inch of average textiles.

Owing to the tiny sizes of the scraps of yarn or textiles needed for laid-in or knot-knit pile, a rare opportunity is

afforded to use up odds and ends of material. Avoid the pitfall of scrappy-looking floor coverings, by careful planning of design to suit the scraps. Fortunately patterns can be wrought into these pile rugs as easily as into knot-tied Oriental pile carpets. Each pile stitch is complete in itself and not dependent upon another.

Laid-in pile is so called because it is actually so inserted. Knot-knit pile gets its name from the fact that each stitch is tied down by a transverse strand of the knitting medium. The stitch bears as close a resemblance to the Ghiordes knot of Oriental rugs as is possible in the craft of knitting. It was devised by the writer for the purpose of further strengthening laid-in pile, which is not difficult to pull out.

Both laid-in and knot-knit pile are fashioned alike with the single exception of the transverse part of the stitch in knot-knitting. Cast on as many stitches as will make the desired width of strip or unit, having the number preferably odd. Knit the first row, and each alternate row, plain. In the second row and each pile row, slip the first stitch. Lay a strand of pile medium across the work between the needles and knit the stitch regardless of it. Push the end of the pile that is on the inner side to the outer side of the work. This folds it about the stitch just taken and brings both ends of the pile on the same side of the knitting. Knit the next stitch plain. Continue knitting one pile stitch and one plain stitch to the end of the row, making the final stitch plain. Every other row must be pile and every other row plain knitting throughout the

work. So only will the pile always come on the same side of the knitting.

Knot-knit pile is started as directed above. Then slip the first stitch in a pile row, lay a strand of the pile medium over the work and knit the stitch regardless of it. Push the inner strand of pile about the stitch just made and through to the outer side of the work. Before taking the next stitch *draw the knitting strand over both strands of pile just inserted,* and then make an ordinary plain stitch. The knitting medium will thus form a transverse strand that ties down the pile in knot fashion. In rug-craft it is indeed valuable. The work proceeds with one pile and one plain stitch, one pile and one plain row, exactly as already directed for laid-in pile rugs.

A portion of Shirvan rug border worked in knot-knitting is pictured in sampler B on Plate III. It gives some idea of the beauty of the pile surface. In Plate V the wrong side of this pile sampler is shown, giving the stitchery as it appears in the foundation. A fine jute yarn is used for the knitting medium, and tapestry yarn, cut into eight-inch lengths doubled twice, is employed for the pile.

There are forty-nine Shirvan motifs in the border, yet owing to the deft manipulation of the seven colors employed, there are scarcely any duplicates. The background is always white; but triangular corner pieces and serrated diamonds are endless in diversity. One color combination is faithfully reproduced in the square of border illustrated. The knitting may proceed in squares afterwards

seamed together, or in full border strips. However the sections are knit, it is absolutely imperative that all the pile runs the same way when sections are seamed together. The direction, to be correct, must be from one end of the rug toward the other and never across the rug. This rule is inflexible in all rugcraft.

The pattern bears the name Shirvan because it is so generally present in Shirvan rugs. The field of the particular rug from which this border is taken consists of three very large diamonds on a background of indigo blue. The diamonds are bordered with the Greek fret and edged with latch hooks. Large diamonds inclose smaller ones similarly edged. The central diamond has a tarantula in the middle. So conventionalized is this motif seldom absent from certain Caucasian rugs, the Shirvan being of the group, that one unacquainted with Oriental designs would find little resemblance to the spider in it. The two end diamonds have a small square or Greek cross in the middle about which are a few scattered motifs in full or in part of the central unit of design found in the serrated diamond of the border. The same seven border colors are used with similar diversity in the rug field. This description is thus minutely given, for, by following it, a homecraft rug can be fashioned with good results. It is well to include another very simple border to go on each side of the Shirvan border. This lesser one may consist of two inch-wide strips of brown edging a central one of alternate one and one-half-inch squares in red and yellow. The yellow throughout the

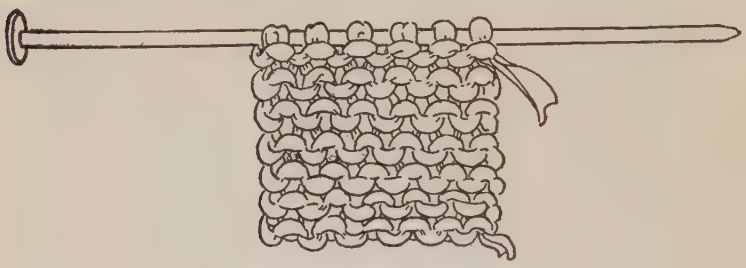
original rug is light, almost a lemon shade. If this secondary border is omitted, put an inch-wide strip of dark brown on both sides of the Shirvan border.

The one remaining type of Smyrna knitting to be considered is the loop-pile, which is as easy to make as either of the others. Each strip or section is begun with one row of plain knitting, and the work proceeds with alternate rows of pile and plain knitting, bringing the pile always on one and the same side. A pile row is knit as follows: Slip the first stitch. Insert the needle in the loop of the next stitch. Wind the *pile medium* about the needle as in taking a stitch and also about two fingers of the left hand, or a mesh held back of the right-hand needle. Bring the knitting medium over the needle and complete the stitch including the pile strands in it. Make each stitch similarly, except the last one in the row, which knit plain. In each plain row of knitting succeeding a pile row, include pile strands as part of each stitch.

Loop-pile knitting lends itself particularly well to rugs having plain centers with crosswise border bands of contrasting tones, or to bold patterns in which there are masses of color. It is quite possible, however, to develop any rug pattern though intricate in design, by making loop stitches in colors indicated by a pattern. The pile is firm and can be sheared or left in loops. The cut pile is handsomest, of course.

In turning from Smyrna knitting to ravel pile knitting, an entirely different type of construction is found. In this the inherent tendency of knitting to ravel and the

elasticity of this craft are the foundation principles. The pile surface is made of inch-wide knitted strips, doubled lengthwise, and both edges sewed simultaneously to a firm foundation textile. If the pile is to be cut, sew the strips three-eighths inch apart and afterwards run a knife or sharp scissors through each loop strip and cut along the top. The sheared edges will ravel sufficiently to form a pile surface, but not enough to reach the sewing, which will remain intact.

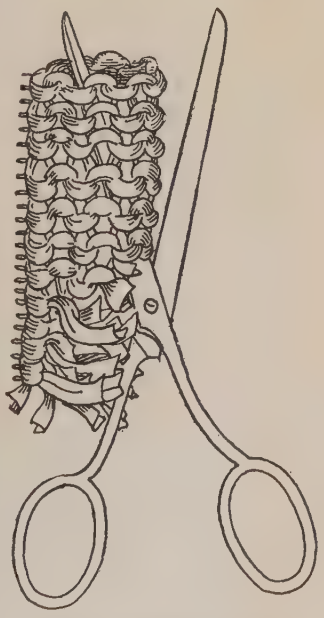


STRIP FOR RAVEL PILE

If the pile is uncut, sew the strips a trifle closer, to keep them upright. In olden times, following the custom of using commonplace and familiar terms, these unsheared rugs went by the descriptive but inelegant name of "washboard mats." The name "fluted pile rug" or "corrugated rug" is no less accurate, and either is certainly more likable. The former being most pleasing, is here chosen.

Ravel pile and fluted pile rugs are apt to be made in bands of color, although they can be made in broad patterns, outlined on the foundation textile and then filled

in with different-colored strips sewed to cover these spaces as the color scheme demands. Unless a design is introduced the strips on round or oval rugs should be sewed in rows from the center in ever-increasing circumferences to the edge as indicated on the foundation. Border bands of contrasting color are easily introduced.



STRIP DOUBLED AND PILE RELEASED

Rectangular rugs may be started with a center crosswise strip and have strips sewed successively on alternate sides, making the corrugations follow the washboard formation. This permits of bands of color across the rug only. A more interesting way is to begin with a strip sewed entirely about the edge as indicated on the foundation, and to sew each succeeding strip just inside the preceding one, finishing with one short straight center strip when there is insufficient space for anything more. With this formation, border bands may extend completely around a rug. When the pile is not sheared the name fluted pile rug is more accurate for this type of construction than is either the washboard or corrugated mat.

Ticking, with its straight woven color stripes, is recommended for a foundation textile for rectangular rugs. The stripes serve as guiding lines to insure evenness of rows. Denim is a good choice for round rugs in which the ticking stripes would prove confusing. The shape of the rug can be outlined symmetrically if a string is thumbtacked to the center of a length of textile, smoothly laid on the floor, and a pencil which is attached to the other end of the string is manipulated like the arm of a pair of compasses. By shortening the string, inner circles of varying circumferences can be marked to indicate borders or to act as guides for sewing on strips.

The edges of knit rugs sewed onto foundations can be finished off in three ways. The foundation may be cut one inch wider than the rug, be turned back and felled or hemmed down or bound flat with braid or tape. A rug lining can be fitted under the foundation and the edges of both, cut close to the rugwork, can be bound together. Or both foundation and rug lining can be turned in, and the lining be overcast to the foundation.

Smooth-faced rugs do not need to be the nondescript floor coverings usually found. They can be given character by design. This is evidenced by the "Window Box Rug" pictured in Plate X. In this the possibilities of flat knitting in rugcraft are brought out to a marked degree, yet without any attempt to wrest from the stitchery more than lies within its scope. Apart from the artistry of the pattern, the charm of the floor covering lies in the absolute consistency of design and technique, which

PLATE X "WINDOW BOX" RUG

Knit rug showing modernistic tendencies, developed in plain knitting.

always unite correctly when a craft is satisfactorily developed. There is a suggestion of the modernistic about the rug, despite its conservative treatment. Window-panes and shutters, flowers and boxes are treated with the reserve of applied design, so superbly carried out in some of the antique Persian garden rugs.

A notable feature in this rug is the circular knitting in which the flowers are worked. While this knitting presents no particular difficulties of technique, it is fine needlecraft. The knitting is done on two needles in wedge-shaped formation. The work never altogether leaves the first needle on which the stitches are cast. Always one pivotal stitch remains until a complete circle is fashioned about it. When the one opening from it to the circumference is seamed together an uninterrupted piece of circular smooth-face knitting results. If each wedge begins with a dark hue, followed by a lighter shade of the same color, there is a petal formation furthering the idea of a flower in full bloom. The wedges of green between the flowers supply the foliage. The elasticity of knitting is taken advantage of in making this floral border, as it permits the foliage wedges to conform to the curved spaces without any special shaping. (See sampler C, Plate XI.)

A strong point in favor of making this smart floor covering is that all the sections are made separately and can be knit as "pick-up" work, before any of the assembling and sewing starts. Another is that the diversity of colors in flowers affords an excellent chance to use up

short lengths of goods. Full directions for making this rug are at the back of the book.

A rug made of one large circle of wedge knitting has another of those prosaic names, graphic but utterly lacking in artistic appeal, that is reminiscent of Puritanism. It is called a "cartwheel mat." It is made by casting on a number of stitches equal to half the desired diameter, and sufficient to make the completed circle large enough for a mat. Fifty stitches will be the most a rug maker can manage in rug mediums. In the first row knit off all stitches except the final one. This (the first stitch cast on) is always left unknit.

Turn the work, and slip the first stitch on the second needle onto the first needle. Put a strand of yarn of a contrasting color between the needles as a marker. Finish the row and knit back again, remembering to leave the stitch next the marker unknit. Turn the work, and slip the first stitch on the second needle onto the first as before. Adjust the marker and continue thus knitting back and forth in continually shortening rows until all the stitches are on the first needle.

A new wedge is now begun by knitting all the stitches but the pivotal one onto the second needle, and knitting each succeeding row exactly as when making the first wedge. To insure uniform stitchery, it is essential to adjust the marker continually at the hub end of a row, for the wedge formation is invariably made here, and never at the outer edge. The circumference of the circle must never be infringed upon.

Whatever the size of the circle, it takes twelve of the wedges to complete it. Some workers prefer to leave four stitches unknit rather than to knit them all off when the work is turned to begin a new wedge, thus avoiding much slipping of stitches and turning of work. In large wedge circles this method can be followed satisfactorily, but when circles are small, all stitches should be knit off.

When the work is turned to start a new wedge is the time to introduce a dark color to form the spokes of the cartwheel. Several grades of color or rows of contrasting color may be put into a large circular rug of this sort, but the colors must always grow lighter as rows grow smaller, so that the contrast is pronounced when the darkest color of the new wedge is introduced. A cartwheel mat should have a narrow band of black strip knitting sewed to the edge. This terminates the radiating lines of a cartwheel rug as definitely as a tire does the spokes of a wagon-wheel.

Despite their unbeautiful name, cartwheel rugs have a rhythm and a classic simplicity that lend distinction. They should never be made in hit-or-miss colors, but ever with the gradation of tones described.

A full-blown flower can be suggested in a large circular rug of wedge formation. Choose three or four shades of one floral color. Start the wedge with the deepest, and work toward the lightest at the finish of the wedge. Repeat this petal scheme throughout all wedges. Substitute a band of green for the black strip of knitting to edge the rug, thereby suggesting foliage. In a bedroom a mat

of this sort carrying out some color of flower in a wallpaper or border or some flower in drapery fabrics would have the charm of novelty to enhance that of the rug itself.

The fundamental elasticity of knitting is the foundation for certain round and oval rugs done in strip knitting. Each strip forms one band completely encircling the rug, and therefore strips are of increasing length as the size of the rug increases. For a round rug, the central strip is just long enough to form a complete circle along the outer edge when the inner one is gathered tight. It must neither cup nor ripple. A round rug may have the center a circle of wedge knitting instead of a gathered strip.

The center of an oval rug is made precisely like an oval braided rug (see page 41). Strips may be uniform, or some may be wider than others. When widths vary, rugs are more interesting. A handsome oval rug is made by surrounding a central row of wedge circles with many rows of strip knitting, then inserting a border of wedge circles and surrounding these with one or more rows of strip knitting.

Knit rugs with plain centers and geometric borders are smart. They appear complicated in construction, but in reality are easy to fashion. Each strip is knit according to directions given in the back of the book. The design may be in black, a sharply contrasting tone of the same color as the field of the rug, or in some darker harmonious tone. Suggested color schemes are light sage-green field

with deep sage design, or black; old blue with black; grey or tan in two tones or with old rose or some other gay color for the design.

An attractive knit rug is made of two-inch color squares so arranged that the hues, besides being in contrast to each other, form a geometric design of ever-widening squares or diamonds surrounding a small one diagonally placed in the center. For schemes of arrangements of this sort, see the diagrams of plans for Fabric Mosaic Rugs on page 247. An occasional row of black may accent the color scheme advantageously. The knitting can proceed in strips two inches wide or four, six, or eight inches wide. The colors should be correctly introduced so that the strips when seamed together carry out the pattern plan. Begin and terminate each strip with black, and seam strips of black of corresponding width down each side of the rug and a complete border will result.

Smooth-face knit rugs can be made of very heavy rug yarn, rope jute, either cotton or wool roving, candlewick, stockings, or strips of cloth, new or old. If of cloth, the strands may be cut on the bias or on the straight of the goods according to the preference of the individual worker. Bias strips are favored because their elasticity is akin to that of yarn. On the other hand, straight strips are favored because they can be prepared quickly, if the cloth is new or strong, by tearing the strands, in the width desired. While this is rapid work, the writer prefers cut strands because smooth, flat edges, not curly ones, result.

The width best for knitting strands entirely depends

upon the textile. Ordinary cotton cloth is generally cut (or torn) one inch wide. But, again, very heavy outing-flannel as narrow as one-quarter inch makes a rug of good weight. Such a width necessitates an extra-heavy textile, however. It is wise to consider the one-inch cotton goods a standard gage and to cut sheer textiles wider, and heavy ones narrower, to approximate it. Outing-flannel is an excellent textile for knitted rug strands.

The knitting stitch should be reasonably tight. An actually loose stitch makes a flimsy rug, but too tight a stitch tends to tire the hands of the rug maker. Use a stitch tension that is congenial to the size of the needle and the medium, and which is found easy to work.

Pile knit strips and units are sewed together on the wrong side. Put two right sides together, and overhand the edges twice, one stitch crossing the other diagonally as in sewing breadths of carpet together. The stitches are invisible on the right side. The pile conceals them. If smooth-face units are neatly seamed together on the wrong side with carpet thread closely matching the rug colors, the stitches should not show on the right side, nor be easily detected on the wrong side. Seams will be firm and strong.

The several types of knit rugs described are sufficient to prove the possibilities of the craft in the realm of rug-making, and to indicate the lines along which individuality can find expression.

In all the rugs mentioned, design and technique, stitch and style have been welded to form fine types. For this

reason the hit-or-miss smooth-face knit rugs, put together in strips, have not been considered. There is nothing to recommend them, and they have been responsible, in large measure, for the poor esteem in which, until very recently, the knit rug has been held. They do not deserve perpetuation. Thrift can scarcely be urged as a reason for fashioning them, since many other ways of using up odds and ends of material have been given. No less time is needed for their construction, and they are not one whit more practical than artistic rugs. Fortunately, in modern knit rugs opportunities for instilling beauty have been seized upon, and it is only such floor coverings that home-craft rug makers to-day are encouraged to fashion.

VII

CROCHETED RUGS

Part I

Inspiration and Development

Though crocheted rugs are a late contribution to floor coverings, the ancestry of the stitch which composes them is old beyond computation. Known as crochet for a few hundred years only, as chain-stitch it reverts to remote ages in such forms as "tambour work," and link-stitch embroidery wrought with a needle through a fabric. It was only when chain-stitch became sufficient unto itself, and apart from a fabric foundation, that it assumed its present guise and became an agent of manual expression, suited to rugcraft. In its new phase of evolution the stitch itself remains identical.

The rugs can be full of the spirit of the Orient, harking back to the period when the stitchery was known in another form, or they can be so embued with the spirit of modernity that their novelty is in unison with the youthfulness of the craft, which is the last to be directed to the making of floor coverings.

Crocheted rugs can be made with a smooth-faced surface or with a pile, left in loops or sheared, and all with the one tool, a crochet hook or needle. To these finishes can be added the corrugated or fluted and the embossed

surfaces, fashioned by manipulating the units after they have been crocheted.

The craft of crocheting is a modest one, yet second to none in point of popularity. The rhythm and simplicity of the technique combine to set the stamp of favor upon it, as well as the sense that a rug is entirely completed with the taking of the final crochet stitch. Binding, lining, or other finishing is not necessary. The one exception to this is found in those rugs in which units are crocheted separately and assembled to complete the whole, as seen in the quaint lozenge rugs of olden times, but more especially in ultra-modern types.

The amazing rapidity with which crocheting develops, particularly in the coarse mediums suited to rug-craft, scores another point in its favor, especially as none of the beauty of the completed rug is sacrificed. Mistakes can be detected quickly, and corrected. Like fancywork, the rug can be carried about, since no frame or loom is used. It is no wonder that crocheted floor coverings find so large a number of interested craftsmen.

The first mention of crochet is in the sixteenth century, when it is recorded as being done in Europe, but in so slight a way as to make little impression upon needlecraft of that era. The date given may indicate the approximate time when crocheting originated, or it may merely signify its appearance in laces, the making of which was an engrossing occupation of needlewomen, especially in Italy and Spain. It is certain that, at present, no examples of crochet before that period are extant, nor

any previous word about the craft as apart from the stitchery of embroidery done with a hook. According to present knowledge, crochet first appeared and came to us through laces.

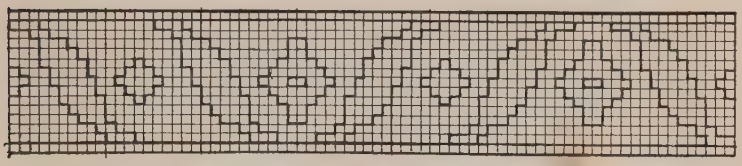
It is interesting to note that, even up to the last quarter of the nineteenth century, chain-stitch was being done on a fabric with a hook as well as a needle, though the latter was more usual. Viewed from this distance of time, the transition from an embroidery to a separate craft seems entirely natural.

Not until three hundred years after its first appearance, did crochet come to the forefront of stitchery as a loop-woven textile. Its travels, meantime, had led into many a convent, where it went by the name of "nun's work"; into Ireland, where it still lingers in the famed Irish point or Honiton lace, as important in the craft as the guipures of Spain; to America, where, less than a hundred years ago, it became an agent in the construction of floor coverings. It takes some stretch of the imagination to bridge the distance between the delicate crocheted laces, and sturdy crocheted rugs which followed the vogue for crocheted capes, shawls and couvrepieds, or afghans, as they were more commonly called, deriving their name from the "Afghan stitch" by which they were constructed.

In the last-named article was the closest counterpart to the crocheted rug, and Afghan stitch, also called "Tunisian stitch," is among those well adapted to rugcraft. Fitting indeed that it should be, for it takes us back to

the Orient, home of rug making. It is from Herat, the capital of Afghanistan, that the famous Herati rugs come; also the design which bears the name of that city and is one of the best known rug patterns.

But it is not alone through this stitch that crochet has an Oriental flavor. One specific style of work in Russian stitch bears the name "Oriental crochet" interchangeably with that of "tapestry crochet." In this ingenious work, embodying all the fascination of color to be found in cross stitch and embroidered tapestry rugs, lies an al-



DETAIL OF HERATI BORDER SHOWN IN PLATE III

most untouched field in rugcraft. It presents an extraordinary opportunity to develop the finest kind of smooth-faced crocheted rugs with every appearance of complicated stitchery, yet minus technical difficulties.

Colors can be introduced at will to accord with the requirements of an intricate pattern. There is the conciseness of cross stitch and precision of tapestry, coupled with the rapidity already referred to as inherent in crochet. One color can be discarded for another as easily as if an embroidery needle were the tool, instead of a crochet needle. Ends do not have to be fastened off immediately. They are allowed to hang from the back of the work

until again needed. If not required for several rows, or not in sufficiently close proximity to be brought readily to the new part of the crochet, the yarn is cut and the end left shaggy as in genuine Oriental Shemakha rugs. Wherever the color is called for in the pattern again, it can be inserted anew as easily as if continuing with the color already on the needle.

The facility with which stitchery and design can be brought into unison in crochet is exemplified in the ship rug pictured. It is no more difficult to work than as if in hooked rugcraft. In crochet it is unique. It is in Oriental or tapestry crochet that this ship rug is wrought. It can be seen at a glance that there is no restriction as to colors. Nor is there any in design, either, beyond that which pertains to stitch formation. This is characteristic, not alone of crochet, but of all textiles, however fashioned, where pattern is brought out in the weave. (The ship rug is shown in color on Plate II.)

The rug bears a design of " Old Ironsides " originated in crochet by the illustrator to fill an increasing demand in this renaissance of ships in handicraft. Many sailing vessels built in America have been depicted on hooked rugs, but this is the first venture of such in crochet rugcraft. " Old Ironsides " is a welcome leader of this fleet. This frigate of high destiny, the first ship to sail under the United States War Department, was christened the *Constitution,* but given the endearing title of " Old Ironsides " for her valiant service. As here depicted, the vessel is sailing a tranquil sea, under pleasant twilight skies.

Her sails swell in the breeze, and flags and pennants are flying.

The rug belongs distinctly to the pictorial type of floor covering, which fact makes the design admirably suited to a wall hanging in either crochet or cross stitch. For this, or for the lining of a glass tray, a fine yarn such as Germantown or tapestry should be chosen.

The rug is done to scale, three stitches to the inch, as rag crochet strands, in one inch width, work up, or three-ply jute, as well as the extra-heavy rug yarns. The size of the rug, therefore, is four feet three inches by three feet. The colors are soft and unobtrusive, yet the gallant frigate stands out proudly. The border of the interlocking wave motifs is delightfully consistent, adding another marine unit, while the outer border in wood tone encloses the picture as if framed in weather driftwood.

Russian stitch (see page 119) is used in developing the rug. This is a plain crochet, always worked in one direction, as is customary in Oriental crochet. When a contrasting color is introduced, it starts *invariably* in the *final loop of the preceding stitch*. Each stitch is approximately one square of color. This smooth-faced rug surface is uninterrupted, and uniform in textile formation. No knots are required in the work, nor do loose ends ever appear on the right side, but are always left hanging on the wrong. Full directions for making will be found at the back of the book, as the reduced size of the illustration makes it somewhat difficult to discern the cross bars that designate stitches as in cross stitch patterns.

It may be added that the rug can be carried out in cross stitch by following the same color directions. The size of the rug will then depend entirely upon the size of the canvas mesh. If that having four holes to an inch is employed, the rug will be approximately two feet by three feet four inches. While rug yarns would naturally be selected for this work, it is possible, when doing it on the coarsest canvas, to use rag strands one-quarter or one-half inch wide. Those cut from silk stockings lend themselves well.

Simple color work of the type distinguishing Oriental crochet can also be carried out in Afghan stitch. This crochet is always worked on the right side, without being turned — an essential not to be overlooked. The rows are worked back and forth and not invariably in one direction, as in tapestry crochet and it takes two " journeys " or rows to complete each stitch (see Plate III). This must be remembered, for in introducing color, it has to be started in the loop row and be finished in the chain row. As Afghan stitch is worked in strips, designs are generally somewhat simpler than in tapestry crochet. Strips can be joined with the precision of breadths of carpets, making patterns match exactly.

A duplex or tri-color tapestry (Oriental crochet) is used when not more than three colors are required. In this work, the color or colors not in use form the filler over which the crocheting is done. Each new color is introduced from the filler as required by the pattern, and must commence in the final loop of the tone being discarded,

which latter color now takes its place as filler. Always take up both loops of the stitch in the preceding row (rose stitch). The strands not in use are disposed of invisibly when worked over.

Tri-color tapestry crochet can be used to add decoration to otherwise plain crocheted rugs by having such borders worked at each end. The design can be taken from the wallpaper of the room for which it is intended, or from a cretonne, chintz, or other ornamental textile, not to mention some embroidered design used in the decorative scheme of the room. A small motif should be selected, for it will be greatly enlarged in rugcraft owing to the size of the stitch. By squaring off a pattern by cross lines, each square being equal to one third or one quarter inch to accord with the size of a stitch in rag or rug yarn mediums, it is easy to know the exact enlargement. One motif can be crocheted in repetition throughout a border strip, variety being instilled by the shading; or the motif can be given variety by working each in a different color. This is a favorite method with Oriental rug makers.

When these rugs are developed in chambray, using grey, sage-green, écru, orchid, etc., to give the plain toned field, and the shades in the tapestry border strip are in artistic harmony, the rugs are similar to the familiar power-loom style popular for bedrooms, bathrooms, nurseries, etc., and on which patterns are stenciled. These loom rugs are sometimes called pictorial, or floral rag rugs, according to the type of pattern imprinted. The cost is little or nothing according to the medium employed. If

new cloth or candlewick is used, a trifling cost is involved. If the material from discarded summer frocks and house dresses is the medium, the cost is nothing.

The simplest form of two-color crochet is the warp-and-weft in which the filler (weft) is visible. In it no pattern is introduced. The decorative element in such rugs consists of color contrasts glimpsed through the mesh of stitchery. To increase the spaces sufficiently to give this effect, one chain-stitch is taken between each plain crochet stitch. Colored twine and jute are excellent warp mediums. The string is worked over a strip of cambric one and three-quarters inches wide, and folded to a width of one half inch. As the crocheting progresses over it, the goods crushes, until it is actually but one quarter inch wide. A heavier filler or weft should be cut narrower. Any tub material can be used for wash rugs. They launder best when string is the warp. Considering the simplicity of workmanship, these rugs are surprisingly decorative and are very economical. They are recommended for kitchen rugs, and simple summer cottages. These floor coverings can also be developed in woolen rags and yarn.

Another style of the warp-and-weft rug is made with the primary medium concealed. When this is the case, the filler is used to supply extra thickness. The medium for the actual stitchery should be somewhat narrower than that for ordinary crocheted rugs. A width of one-half inch is sufficient, and one-quarter inch if the medium is stout.

Color can be brought into plain crocheting that is worked continuously, merely by discarding one color and taking up another without crocheting over the unwanted strand except for the distance required by the motif. This method is frequently employed when some very small motif is introduced into a rug field otherwise solid in color. The arrowhead is a good example of a motif to be used thus (see Plate XI); so also are the diamond, triangle and hour-glass motifs, the Greek cross, swastika, and innumerable other separate motifs. Material is conserved when motifs are introduced thus, although it can only be done satisfactorily when they are few and far between.

Loose ends of medium must be carefully interwoven through the stitchery to dispose of them neatly. If they are laced around strands of their own color, they can be concealed best. Designs will be clear-cut only if, when changing color, the new one is used to complete the stitch just preceding. This can be done by using the new color for the *final loop* in the previous stitch. *This is essential in all color work crochet.*

The rug maker who once uses color work crochet will soon find herself copying Oriental motifs direct from rugs, from cross stitch patterns, bead work designs, etc. A whole new range of rug possibilities in the craft of crochet is revealed. When colors and patterns are Oriental, and the rugs are made in heavy strands of woolen textile, or heavy woolen yarn, they become choice examples of crocheted homecraft rugs. This also is true

when quaint old types of patterns are revived as in the ship rug pictured.

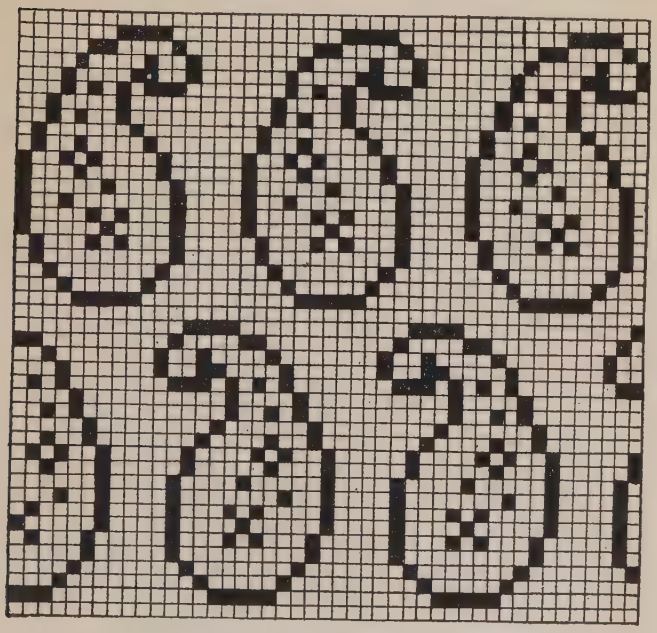
The use of pattern in crocheted rugs is by no means confined to the styles of work described. It is a feature of crocheted rugs in general, but in none can the intricacy of pattern be developed through an indefinite number of tones, as in Oriental crochet wrought in Russian stitch. Two- and three-color tapestry crochet come next in color possibilities capable of development in smooth-faced rug surfaces. In pile crochet, another style of rug and method of employing color are open to discussion and will be considered later.

When designs characteristic of Afghan carpets are worked into homecraft rugs in Oriental crochet, there is a result highly consistent. To promote this similarity, use Turkoman (blood) red for the field background. This is a deep dull red. Have the motifs in rich blue, brownish yellow (or deep orange) or a very deep ivory or pale amber. They may be further accented and made more typical by outlining in dark brown. All these colors should be combined in one rug.

In the Herati motifs, an entirely different type is apparent. Notwithstanding the fact that Herat is the capital of Afghanistan, the rugs bearing the name are distinctly Persian in pattern. The situation of this city is so close to the Persian border that it is accountable for the trend. The Herati motif, known as the fish or twin fish because of its resemblance to the sea creatures, is so popular that it is said to appear in some one of its adapted forms in ap-

proximately half of all Oriental rugs. In its present guise, it has been modified to suit crochet. Each square represents one crochet stitch.

The pear motif is almost as popular, and is known by



PEAR MOTIF FOR RUG FIELD IN CROCHET

innumerable names, such as river loop, crown jewel, flame, etc. In Herati carpets all the stems in every row turn in the same direction. By changing the direction of the stems in alternate rows, Saraband, and Shiraz characteristics prevail. Whatever the slant of the mo-

tif, the stem is invariably toward the top of the rug.

In adapting patterns which form such a strong feature of crocheted rugs, basketry will be found a fertile source of inspiration. Fascinating patterns can be taken directly from baskets woven by the Amerinds. The aboriginal American Indians living in the Stone Age, and never advancing far enough in civilization to construct crude looms for weaving, yet made baskets of fine workmanship. When design entered into the Indian baskets, it had the conventional elements so desirable in floor coverings. The oval and round shapes of flat baskets offer patterns that can be copied by counted stitchery. They supply both shape and designs without alteration being necessary. (See Plate XV.)

The picturesque patterns found in Peruvian and old Inca textiles lend themselves remarkably to rug making. Designs can be taken off on cross-bar draughting paper. The novice may find it wise to use this paper to take off basketry patterns that are at all intricate. It may be added that, in crochet adaptations made from baskets, there is found a relative quality in the stitchery that is in close parallel.

Ancient beadwork designs are also excellent to use in rug patterns. Cross stitch, ancient and modern, can be wrought in crochet, since one stitch occupies a space approximating a cross stitch. Filet patterns can also be used, if each square of crochet is reckoned as occupying that of a "block" or "space" and no openwork is made. To bring out the pattern, "blocks" must be done in color

against a contrasting background, corresponding to the "spaces." In cross stitch and filet patterns, particular care must be exercised to pick out those suited to rugcraft, as so many are intended for dainty embroideries or lacework, rather than for stout floor coverings. The size of the crochet stitch must be remembered (two to four to an inch) as it greatly magnifies the pattern.

Silhouette crochet rugs are in line with the fashion for this style in rugcraft. Nothing is much easier than to copy patterns in this two-color work. A printed silhouette can be squared off as previously described, and a rug pattern result. Or some pattern brought out for cross stitch, as for example the one on page 183, can be followed in crochet.

It is so usual for women to design their own crocheted rugs that special attention has been given to suggesting interesting avenues for inspiration, and ways and means of using data so acquired. Another opportunity for fashioning attractive rugs is found in the use of appliqué motifs whereby an ornamental embossed effect is achieved. Still another way is by the assembling of separate units, as found in the quaint lozenge rugs of olden days, and in the tessellated rugs of the present time (see sampler E on Plate XI). The rug composed of separate units is a kind well adapted to carpet-size floor coverings. These can be made in any dimensions.

In all the rugs previously described, little mention has been made of any but smooth-faced surfaces. An entirely new type of crocheted rug comes to light in pile crochet. In these rugs design is brought out, as in Smyrna knit pile,

the only difference being that plain crochet is used as a foundation instead of knitting. The crocheted pile can be composed of separate short lengths of medium, and any color can be used independently, as in knot pile carpets. Or a loop pile of a continuous length of medium can be introduced as in the second type of pile knitting. Ravel pile knitting cannot be simulated in crochet. It belongs solely to knitting.

The technique of pile crochet is explained fully in the latter part of this chapter.

As the introduction of design in pile crochet duplicates that of Smyrna knitting, it would be redundancy to repeat it. By thus cutting short the account of the work, it must not be understood that it lacks significance in rug-craft, but that directions can be found elsewhere in the book. Those who prefer the craft of crochet to that of its sister craft, knitting, will find that crochet lends itself admirably to the making of pile rugs in intricate or simple patterns.

Part II

Tool, Stitches and Mediums

The crochet hook is the sole tool and equipment used in the making of crocheted rugs. It should be sufficiently large to be congenial to the medium which is coarse. It should also be light and strong. Aluminum hooks are lightest, though wooden and bone hooks are generally

employed. An extra-large hook comes in wood. Steel, the best for fine crocheting, is too heavy for large needles and is not made in sizes suited to rugcraft.

It is from the tool that the craft of crochet gets its name. The word, which comes in French from *croche,* and in Danish from *krooke,* immediately suggests the Anglicized words *crook* and *hook*. The highly polished and finely finished crochet hooks of to-day are but improvements on the original sewing needle of prehistoric times, which is described as a rude bodkin having a hook instead of an eye. With it, fibrous tendrils and threads were poked and pulled through a textile.

So admirably is the hooked needle suited to rug making that it is frequently appropriated for other rugcrafts besides crocheting, notably hooked rug work and certain kinds of knot-tied pile. The rug hook used is nothing more nor less than an enlarged crochet hook of the type used in tambour work. It is with the hooked needle in large size and having a short shank that most crocheted rugs are made, and it is this sort of needle that is requisitioned for other crafts. The needle with a long shank and ball-tipped at the end opposite the hook is required for rugs made in Afghan stitch.

This long needle is necessary because, as in knitting, all stitches are cast onto one needle. Indeed in Afghan (Tunisian) stitchery, the resemblance of crochet to its sister craft, knitting, is emphasized. It is a veritable knitting with one needle, though it would be a task to do without the aid of the *croche* in the needle. So closely

allied are the two crafts that crochet is now classified as "knitting work done with a hook instead of with pins" —as the needles are also called.

From the fact that the stitch evolved from embroidery and is also akin to knitting, it will be seen that crocheting holds an intriguing position between the two crafts, coupling distinct characteristics of embroidery and knitting, through the one item of stitch formation which is equally chain and loop. It is with great effect that these can be employed in rug making.

Crochet stitch, in whatever different form it appears, is never anything but a loop or a succession of loops drawn through one or more other loops. Variety is gained in the method these loops are taken, the number of "overs" (times that the thread is put over the needle) and the way the thread is drawn through the crocheted material already made. By such means, a close, open, or lace stitchery is formed, the latter by skipping stitches.

Close crochet should be used for rugcraft. It supplies a firm, uninterrupted weave capable of withstanding hard wear. It consists of stitches without "overs," taken in sequence through each stitch in a preceding row. There are many kinds of close crochet stitches, five of which are particularly suited to crocheted rugcraft, because of their strength and simplicity. These are rose stitch (often called plain crochet), Russian stitch, piqué, half treble, and Afghan. In order to facilitate homecraft rug making, explicit directions for each will be given.

All rugs are begun with chain-stitches, so named be-

cause each stitch is a link of connection with the preceding and following stitch. The chain so fashioned may form a length determining the width of a rug, or section of a rug; or the ends of the chain may be joined to form the center for a round, square, hexagonal, etc., floor covering.

Rose stitch is the one most commonly used in rug making. The only difference between it and plain crochet is that the needle is put under *both* loops of the stitch in a preceding row instead of under the top loop merely. As will be seen, rose stitch is thereby made stronger than plain crochet, with which it is frequently confused.

Russian stitch is rose stitch always worked in one direction. In round and oval rugs it would therefore not differ in any way. It is when the work necessitates turning to traverse back and forth, as in rectangular and square rugs and in runners, that the change is imperative. In each instance the work has a decided right and wrong side. In Russian stitch each row progresses from right to left, the medium being caught through a loop in the first stitch at the right, and being finished in the final stitch at the left after which the medium is cut and the end drawn through the final loop to prevent raveling out. This stitch lends itself as does no other to certain kinds of crocheting, conspicuous among which is Oriental tapestry crochet instanced in the foregoing chapter in the ship rug.

Piqué stitch differs from Russian stitch in one particular only. The needle is inserted under the *vertical* strand of the stitch in the preceding row. The appearance of the

work is totally different, however, for it has a braided effect on the wrong side, which generally is used as the right when the work is completed. Needless to say, since it is likened to Russian stitch the crocheting always progresses from right to left, unless the work is done in one continuous " journey," as in round and oval rugs.

Half treble, although strictly speaking not a close stitch according to the definition, since it does have one " over," is so compact, notwithstanding, that it actually is close, and therefore well adapted to rugcraft. In taking the stitch, before inserting the needle in the interstice *between* two stitches in a preceding row, the medium is brought from behind and over the needle which is then put through the work as described. A loop of the medium is caught and drawn through the work, caught again and drawn through all three loops on the shank of the needle.

The only other stitch requiring directions is Afghan stitch, conceded to be the easiest of all crochet stitches. For this reason it has earned the name of " idiot's stitch " and " fool's stitch," requiring no mental acumen whatever to fashion. It is well to speak of this, for, as it is worked in two " journeys," it takes longer to describe than any of the others. It is akin to knitting, and also must be made in strips or sections and then sewed together to form a rug. It supplies an extra-firm weave, however. (See Plates III and V, bottom sampler.)

Make a chain the desired length. Through the second stitch from the needle, and each succeeding stitch of the chain, draw a loop of the medium and let it remain on

the shank of the needle. This casting on of stitches is done in every alternate row, which is termed the " loop " row. In other alternate rows the stitches are cast off as follows: catch the medium with the needle and draw it through one stitch, catch it again and draw it through two stitches. Continue (in all but the first stitch) to catch the medium and draw it through *two* loops. At the final stitch in the row all the stitches, but a single loop, will have been " knit " off the crochet needle. In the third and each succeeding *loop* row, insert the needle *under the vertical line* of the stitch in the preceding row. These vertical lines are so clearly visible in the crochet that it has acquired the name of " railroad crochet."

Three significant names for this stitch having been given, two others of historical value may be mentioned: one, " Victorian crochet," denoting the reign in which it was originated; and a second, " Princess Frederick William Stitch," setting the time of its appearance even more precisely. It was given this name to honor the princess who was united to the English prince just at this time. In all the names except one, " tricot stitch," there is purport, but it is in " Afghan stitch " that its alliance to rugcraft is notable. Afghan stitch is always worked on the right side, but in such a way that it progresses in alternate directions without breaking the medium. Rugs in this stitch are rectangular or square, never circular or oval.

Oriental or tapestry crochet employs no stitch peculiar to itself as apart from other rugcraft crochet, as does Afghan work, yet it is distinctive, as has been instanced.

It is simply one form of plain close crochet, known as Russian stitch. It is entitled to the names Oriental or tapestry crochet only when many colors are wrought into the stitchery, thereby instilling pictorial or patterned elements reflecting tapestry characteristics or suggesting Oriental stitchery. Fortunately this is as easy to accomplish in crochet as in color embroidery.

To facilitate the work it is wise to wind each color into small balls, for, in working, this prevents the strands from getting tangled. The balls must be light, so that they do not drag on the stitchery. When colors are used up before the requirements of the pattern, new balls of like color should be added. As the work progresses, the loose ends dangling from the back of the work should be fastened off securely by running them in a weaving fashion through the back of the stitches. There is no occasion for the tips of the medium to be entirely concealed. They are on the wrong side, and can be left slightly shaggy, once the stitches are tight. Tapestry weaves and embroidery are thus uneven, and likewise Shemakha rugs, which are a type of genuine Oriental tapestry.

The mediums best suited to crocheted rugs are yarns, rags, jute in both yarn and rope sizes, and wool and cotton roving, which, for rug making, comes slightly twisted and is given the name of rug yarn, although there are far finer wool rug yarns than these. Some other mediums are chenille and caterpillar braid (an antiquated crochet medium), ravelings from carpets and also from knitted and crocheted articles, stockings, twine, string, clothesline,

and woven silk cut into strips. Twine, string and clothesline are used in conjunction with other mediums. The first two are used for stitchery over the last or over folded bands of textile about one-half inch wide (after it is turned in at each side and down the center). The last, as a filler, is apt to be entirely concealed, though sometimes it is glimpsed between stitches. It supplies great durability and adds extra thickness. It can be made an ornamental element when crocheted over in a contrasting color of coarse string or jute.

Silk is ill-adapted to crocheted rugs in flat weave, and but little more so in pile rugs. It is too delicate a textile. It is true that there is precedent for silk rugs, as instanced in choice Oriental carpets, but these are knot pile and of silken threads, not strips of a fabric, between which there is a wide difference. Moreover, silk Oriental carpets most frequently found in Chinese floor coverings were, and still are, especially reserved for rugs in mosques, temples and palaces, and for wall hangings, and were never intended to stand the tread of boots and shoes.

The width of rag strips for crocheting rugs may vary from one-half inch to one inch, or even more if the textile is very sheer. The difference may be due to the type of rug being fashioned or the rug maker's preference. One inch is the accepted width, however, for flat close stitch, the one-half inch width being practical in very few cases. The medium may be folded and pressed to conceal raw edges, or it may be used without any attempt to conceal the raw edges. The tips of threads that fray in most fab-

rics will soon wear off when the rug is used, and the stitchery is such that further fraying is not encouraged.

The material may be cut bias or straight; preferably the lengthwise, not the width of the goods. It should be borne in mind that knit goods when used for rug strands is used on the wrong side because of the natural tendency of the material to curl over the right side leaving only the wrong side exposed. By so doing a sort of rug yarn strand is formed which lends itself admirably to rugcraft. The wrong side is equally as attractive as the right for this purpose.

Goods of different weights that are used together must be so cut that the width of each supplies strands of approximately the same size. For example if the width chosen is one inch to suit the majority of the cloth, that which is heavier must be cut somewhat narrower and that thinner must be cut wider. It is only when the materials combined are in strands of the same size that a rug can be well constructed. This is the first essential.

The embossed crocheted rug is a distinctly modern floor covering made only in recent years or in such exceptional earlier instances as to leave no impression on the rugcraft. The embossing consists of appliquéd motifs crocheted separately and sewed onto a foundation of plain crocheting. There is no reason for restricting these rugs to any special medium, for they can be developed in one as well as another. Nevertheless, so far jute has proved the prime favorite, few rugs being made except in it. For this reason full directions are relegated to the chapter on jute floor

PLATE XI

RUG SAMPLERS

A, India drugget border, duplex crochet. *B*, Arrowhead in crochet. *C*, Detail of "Window Box" rug (Plate X). *D*, Border for jute porch rug, in crochet. *E*, Crocheted squares for tessellated rug. (*Samplers executed by the Author.*)

PLATE XII HOOKED RUGS AND BRAIDED SAMPLERS

A, Hooked Davenport foot-mat or chair seat. *B*, Braided *S* motif. *C*, Detail of braiding used in Lattice Rambler (Plate IV). *D*, Hooked jute rug with Oriental pattern. (*Davenport mat executed by Mrs. Henry Spencer; owned by Mrs. Evans Bailey Ellicott, Boston. Hooked jute rug designed, executed and owned by the Author.*)

coverings. In that chapter will be found many other types of crocheted rugs which also can be developed in other mediums. They are given in the jute category because especially well adapted to porch rugs, and for them jute is chosen as most nearly akin to grass and fiber, popular for porches.

In turning from the crocheted rugs developed in flat stitchery to those made with a pile, it will be found that both looped and cut pile can be fashioned easily. Loop pile is made by winding the medium over the forefinger, or about a flat strip of wood or metal, technically known as a " mesh," and catching the loop so formed into the stitchery of plain crochet. To do this the crochet needle is first inserted under both loops of the stitch in a preceding row (rose stitch), then the medium is brought down under and about the mesh, caught by the needle, and then the stitch is completed. Only an expert should work without the mesh, for although it is quite possible to form the loop about the forefinger, it is not so easy. Every other row should be in plain and every alternate one in loop stitch, for thus only can the loops all be on the same side — unless Russian stitch is used. In this, worked always from right to left, each row can be loop, and a much closer pile result.

Cut pile is made by doubling a bit of medium, either yarn or fabric cut one-quarter inch wide and one or one and one-quarter inches long, and catching the loop with the hook inserted under both loops of a stitch in a preceding row, and then completing the stitch. The one and

one-quarter inch length is recommended, as it takes the medium up a bit in forming the stitch and a one-half inch pile is a good depth. As each pile stitch is an entirely separate unit, copying designs in any of the various methods described is no trouble whatsoever. The pile stitches must come on one side of the work only, either in alternate rows or in succeeding ones in the Russian stitch method. When the medium is fine yarn, use more than one strand for either the loop or cut pile. In the loop pile the medium would have to be wound twice around the "mesh" instead of but once.

The stitchery of crocheted rugs, whether in flat or pile surfaces, is never anything but simple and easy. If patterns are correctly chosen and mediums conform to the type of rug being developed, rugs can be handsome as well as practical. Those described in the present chapter are especially intended for use within the house. In the chapter on jute rugs those for porches and sun parlors are given. This does not mean that some of the rugs herein described cannot be used on porches, nor that all rugs noted in the jute chapter are barred from indoor use. The India drugget, for instance, naturally comes under rugs made of jute, but candlewick may also be used, and in either style the rug can be used indoors or out. It is for the rug maker to suit the stitch to the style, and the style to the purpose.

VIII

RUGS OF JUTE YARN

Jute yarn is a modern needlecraft medium especially well suited to rugs for porches, verandas, sun parlors and simple summer cottages. It supplies floor coverings corresponding to those made from fiber, straw, and grass, from which the smart modern rugs intended for these same purposes are fashioned. It is a loosely twisted " mail bundle twine " that was brought out about 1921, in a wide range of colors and in a twist and texture which, if a bit wirey, is sufficiently supple and similar to warrant the name jute yarn. It proved from the very first to be remarkably well adapted to the making of rugs. The three-ply yarn and rope yarn (a slightly twisted roving) are best for this use. No new craft is employed and the medium can be substituted for others to suit the type of rug being made.

There is nothing new about jute itself, for it has been known for centuries, under the name of pôt, but it was not until 1746 that it became known outside of India in jute rope. Since that time it has become so important a factor in rope, twine and even in textile manufacturing, that it has a recognized rank with hemp, for the first two purposes, and with flax and cotton for the last, although in a far lower scale of value. It will be apparent from this summary that it is a decidedly unpretentious medium in

rugcraft, having its place, as mentioned, with grass, fiber, etc. It is important, however, in its potentiality since it supplies a medium for making rugs of a distinct type impossible hitherto in a homecraft product.

The three crafts in which jute can be used most advantageously in rug making are crocheting, hooking and braiding. These are named in the order of precedence. The technique of construction can be found in the chapters on these crafts, but some special rugs that are at their best when developed in jute will be given in this chapter together with directions for their making. It lies in the discretion of the rug maker whether she makes the rugs in jute or another medium, however, for several other materials lend themselves admirably, such as rags, candlewick, etc.

The four crocheted rugs that stand out as especially interesting are the India drugget replica, the embossed rug, the fancy grass replica and the tessellated rug. The first two are as much for indoors as out, while the last two are more appropriate to sun porches, verandas, etc., — sheltered out-of-door places in which decorative schemes are carried out more or less extensively.

The India drugget replica is a unique jute rug consistent in character with the medium which comes largely from Calcutta, India. The border pictured (Plate XI) was adapted by the writer from a genuine India drugget. It is in duplex crochet, the simplified tapestry work described elsewhere. The colors are crimson and black, the red of the jute yarn corresponding almost exactly to

the shade characteristic of this meander in India druggets. Its combination with black is necessary to be true to type. The plain field of natural colored jute is in the nearest tone to that found in India druggets that can be had in the medium. It is sufficiently near for the rug to be an excellent duplication of the genuine in color and character. It can be used appropriately wherever an India drugget would be.

The embossed rug in crochet is distinctly modern. It consists of a plain field with a contrasting border. On the field are sewed separately crocheted motifs, arranged to form a design, which may almost conceal the background or cover but a small portion of it. Color contrast plays a large part in the rugs of either style. For instance, a rug field of natural colored jute surrounded with a black border may have a round flat modernistic flower in old blue, with a few rows of deep yellow for a center, while from the edges of the flower extend frond-shaped leaves that reach their tapering tips to the border. In this the field is almost concealed.

Or an oval rug with a green field and black border may have three circular deep yellow discs, with the centers of brown (to simulate ox-eyed daisies), arranged in a row in the middle of the rug. Between them and the black border, four or six butterflies may be arranged, the number varying to suit the size of the rug. These scattered motifs leave much of the field background visible. Floral motifs comprise the chief units to be appliquéd in these embossed rugs, which may as readily be

developed in rags, etc., as jute, but at the present time the latter medium is popular.

Jute rugs reproducing effects found in the modern colorful and ornamental grass types, have the motifs made separately and assembled to form borders, and occasionally centers for the floor coverings. Flowers are of the modernistic disc sort, all in one color or with centers contrasting. Foliage is formed of elongated oval leaves, while buds are smaller ovals tipped with a deep tone of the flower hue. Shapes of flowers, leaves and buds may be varied at the will of the rug maker who wishes to follow nature more closely, but the customary formation is given.

Any of the smart grass rugs can be copied or the rug maker can do her own designing. A plain field is advised because the rug is easier to fashion and is also more durable. One or more borders can be used to suit the size of the floor covering, although one is sufficient. There must always be an outer border of plain crochet several inches wide to inclose the ornamental one. The plain band may be in the field color, or black. Or it may be in the former with a pin-line of black at the inner and outer edges. The rug maker who makes her own patterns can do them to scale on draughting or plain paper. This is the professional method.

There are women who prefer, however, to make the rug field, and then crochet as many sets of motifs as will be needed to surround it. Any slight discrepancies in the length of the ornamental border and the circumference of the rug field can be adjusted (until fitting together is

correct) by raveling out a few rows, if the field is too large or by crocheting a few extra rows if it is too small. The rug maker should crochet a full set of motifs and make her arrangement of them first, and then crochet as many sets as will fit about the rug. Care must be taken to have the units fit together as closely as possible, so that the interstices will be small, as is the case in the grass rugs made for commercial purposes.

The shape of these ornamental rugs is generally oval or round. The sizes vary from door-mats to those big enough to carpet a large sun parlor floor. There is no reason to eliminate oblong rugs. In these, borders come at each end only. If the rug is square the border encloses the field, as in the round and oval shapes.

Tessellated grass and fiber rugs are among the modern porch rugs that lend themselves remarkably to reproduction in jute. They consist of separate squares of natural colored fiber used alone or alternately with some one other color, such as brown, green, blue or black. The squares may measure from twelve to twenty inches. The direction of the stitchery supplies a decorative element clearly defining squares even when all are of a like color. It is an easy matter to make these rugs, for no section is very large and the work can be " pick-up work " as portable as any other needlework. The finished rugs have a dignified smartness. (See Plate XI.)

To form a square, make a chain of four and join into a ring. Chain one and into the next stitch in the chain make two close stitches. Into each of the other three stitches

in the chain make three close stitches. Into the stitch having but two stitches make another close stitch. This finishes the first row. Make a slip stitch at the finish of the row and start the next row precisely as the first, with a chain of one and then two close stitches in the slip stitch. Crochet three close stitches in the middle stitch of each of the groups of the first row, and one in all of the other stitches. Finish the row as the first row. Make each succeeding row similarly, always making three stitches in the middle stitch in the group of three in the preceding row, thus securing regular and even corners.

The Lozenge rug is an old-time rag floor covering. It is similar to the tessellated rug in that units are made separately, but it is of an entirely different character otherwise. Each lozenge, generally hexagonal, is fitted to those next it and crocheted in position. No two are necessarily precisely alike in colors, but a scheme should prevail, such as dark or gay centers with rows of contrasting hues to lighter outside rows; or light centers with dark outside rows and brilliant tones in bands between. Black is used for crocheting motifs together thus giving each a distinct outline.

Such lozenge rugs are pre-eminently economical, as scraps of textiles or yarn can be used advantageously. It is only when color contrasts are artistic, however, that the rug is worthy. By a careful selection of tones, preferably few and used in identical combinations in alternating lozenges, or arranged according to some well-planned scheme, the rugs become interesting. The hexagon unit

is crocheted precisely as a table mat for hot dishes, and requires no special directions.

In turning from crocheted jute rugs to those in the craft of hooking, we find both three-ply and rope jute acceptable. It is unwise to shear the pile, since the material does not felt, and cutting the loops weakens the fabric. It is true that by very careful handling, a cut pile may remain firm for quite a long time, but it cannot be relied upon to resist wear. Its durability is sapped. This non-felting characteristic is always taken into account in textile manufacturing in which jute is employed, and homecraft workers may well benefit by the expert skill therein exhibited. In hooked rugs each stitch, when sheared, is separate not even being connected by the felting of filaments that touch, as in wool rags. Also jute has an inherent glossy texture that is somewhat slippery, and stitches will ease out of the foundation readily. Sufficient reason for leaving loops unsheared is apparent.

The jute rug pictured is in genuine hooking. It was made by the writer when carrying on some experiments with the medium when it first came out. The rug has been in constant and rather hard use ever since and is by no means worn out yet. The motifs were taken from an antique Daghestan. The heaviest rope jute was employed, and the coarseness of the medium necessitated decided enlargement of the pattern, but this does not mar the beauty. The double pointing of the field design immediately classes the mat as a hearth rug. The desirability of this type of rug is stressed elsewhere, together with the

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inadvisability of fashioning prayer rugs. The jute hooked rug is shown on Plate XII.

It may be mentioned that as jute is a medium lower in rank than rags or yarn, the rugs, however attractive, do not belong in quite the same class. Speed in the making is therefore doubly desirable, and the punch needle immediately suggests itself as admirably filling the requirements as a tool of construction. It should be borne in mind that jute hooked rugs are distinctly for porches, and for houses modestly furnished, for cottages and simple seashore places. They are not intended for the main rooms of a city house.

There is a type of India drugget with a deep pile. The designs in them are not different from some knot-tied yarn carpets from the Orient. The India rugs commonly come in large sizes. Periodically they have a pronounced vogue. They may be simulated well in jute, in rope or three-ply yarn, but preferably in the former. For the making of these the punch needle lends itself well. For carpet-size druggets, widths of burlap the desired length for the carpet should be hooked, and then sewed together like a carpet, thus insuring motifs matching precisely. It is important to have the colors Oriental as well as the pattern.

The third craft suited to jute rug making is braiding. The rugs are constructed as other braided rugs, except that three strands at least of the jute yarn are used in each strand for plaiting. Colors play an important part, as each jute strand may differ from the others making nine hues

in a single plait. Such a kaleidoscopic combination is not as pleasing, however, as more conservative color treatment. In these rugs, as in all homecraft floor coverings, beauty is dependent upon the artistry of the rug maker. This artistry can be brought into good play in all the various kinds of jute rugs described.

Part III
RUGS WITH SUPERIMPOSED SURFACES

IX

TAPESTRY FLOOR COVERINGS

The highest type of decorative textile floor covering is found in the tapestry rug. In ancient times, finely drawn threads of pure gold and silver were interwoven with delicate strands of silk and wool, and jewels of enormous value were introduced. Nor did the grandeur confine itself to the rugs alone, for they were held in place by orange-shaped gold weights, studded with precious stones placed sometimes at intervals of not over four feet. These ancient rug fasteners of five-pound gold nuggets bear little resemblance to modern ones of no intrinsic value, though the latter have the convenient advantage of being flat.

Most of these tapestries that have withstood the ravages of time have had the precious metals "drizzled" out, and the gems have been stolen or confiscated. Nevertheless, so priceless are they to-day that to tread upon them would be desecration. They are again put to their original purpose of wall hangings, as we call them, though they actually were tent hangings. By their once gay colors, now mellowed by age, the drabness and severe plainness of the tent sides became a blaze of glory, and the stitchery pictures beautified the walls then, as fine oil paintings now do.

The transformation of tapestry tent hangings to textile floor coverings, is ascribed to a picturesque occurrence. Tradition says that a tapestry was taken from a wall and spread before a king to glorify his pathway, protect his feet, and bespeak homage. When he had passed on his way, the textile was again hung in its accustomed place, to be more highly treasured, even, than before. This respect having once been paid, it could scarcely be disregarded again, and a precedent was established for this monarch, and others with whom subjects wished to court favor.

It was no such sumptuous carpet that was spread before Queen Elizabeth to protect her feet from the mud, but an act of equally chivalrous courtesy and homage was paid by Sir Walter Raleigh when he snatched the coat from his back and spread it in the pathway of his Queen, lest her dainty shoes find contact with the muddy water. The contrast in these "carpets" improvised for royalty is not as immense as might at first appear, for the coats of courtiers in the days of "Good Queen Bess" were lavishly embroidered in silks and gold threads, and ornamented with gold lace.

It is known that, from time immemorial, rugs were associated with worship and often used as decorations for altars. They continue to be so employed to this day, in many countries, as instanced in the Mecca rugs, and other holy carpets. This raises a doubt about the romantic tale of the origin of carpets following the use of tapestries as floor coverings spread before kings, for it certainly

seems equally probable that the first tapestry used as a carpet was laid before an altar and trod upon by priests and those known as holy men. Credence can be given either story, with the surety that one or the other of them is true. Romance is the very warp and weft of tapestry floor coverings.

There is a concensus of opinion, based on archæological research and textile investigation, that the first rugs were without pile, "smooth-faced," as they are termed. This is proof, apart from tradition, that tapestry was the textile. This is further substantiated by the fact that the only two types of smooth-faced Oriental rugs are in tapestry weave: namely, Ghileems, and Shemakhas. The former is reputed to be the first and earliest type of Oriental rug.

In what era in the dawn of civilization tapestries, as we know them, were first fabricated is not known, but that they came from the Far East is recognized as certain. The Israelites are said to have instructed the Egyptians in tapestry weaving. Pieces of tapestry from Egyptian tombs of great antiquity are to be seen in the museum of Cairo. Centuries later the work found its way to France, perhaps in 726 A.D. It kept its prestige as a religious and royal textile inviolate. Up to the middle of the thirteenth century the *tapissiers* stated that their work "is for the service only of churches or great men like kings or nobles" (*Livres des Métiers*).

When the work entered England as a craft in 1509, it was still kept exclusive. Cost would have been a barrier even if the weavers did lift their pronouncement, as

princely prices prevailed. It is interesting to note that the Aubusson carpets, so justly famous, are tapestry textiles of smooth-face. Whether made in Europe or America, these carpets are used to-day for wall hangings in preference to floor coverings. Their manufacture with tiny bobbins (instead of threaded needles) applied from the back is in accord with time-honored methods.

Ancient tapestries — some of which, as we have seen, were used as rugs — were woven on a loom of some sort, and the stitches were taken around the warp threads in such a way that they formed an interlacing weft, there being none other. Later on, tiny hand bobbins were employed, each being wound with some colored yarn required in the pattern, the thread being cut and the end left hanging after the stitches were taken. As the ends came on the wrong side of the work, and were proof against unraveling, they were left shaggy. The reverse side of a needlepoint tapestry rug presents much the same appearance, as it, too, has short ends hanging.

From this brief account of the stitchery it will be seen that it is a sort of embroidery done on the warp. It is not duplicated by cross stitch, with which, in this age, tapestry is often confused, for cross stitch is inherently an embroidery on a previously woven textile, while tapestry is inherently a textile embroidered *in the weaving*. Genuine tapestry can never be embroidery only; hence the name "needlepoint tapestry," "canvas tapestry," and "tapestry embroidery" are significant, always differentiating the embroidery from the genuine article. This does

not mean that the latter, by whichever name it is called, is not exquisite, as indeed it may be, but that it is always a replica.

There are certain similarities, however, between genuine tapestry work and needlepoint tapestry embroidery on canvas, and when these are understood, a reason is recognized for the appellation "tapestry rugs" to canvas worked carpets.

Needlepoint canvas was first made to reproduce a textile from which certain warp and weft threads had been drawn out. Embroidery on such a home-prepared fabric is common in all countries abroad. When the stitches are taken on the warp threads only, either in loom or hand-drawn foundations, the work corresponds to genuine tapestry and the name "tapestry stitch" is deserved.

Homecraft rugs, therefore, can rightfully claim to be tapestry floor coverings when they are embroidered on warp threads, whether held together by weft, afterward inserted, or previously woven into the textile. The exigencies of canvas stitchery are such, however, that in smooth-faced surfaces, such as tapestry embroidery, the medium naturally crosses the weft also, strengthening, though not actually making it. As the weft can neither be dispensed with nor combed up, it would be visible unless worked over, so this becomes an indispensable element in the embroidery, all the more since the work must be done on canvas with a large mesh and coarse medium, to insure sufficient weight and durability to the rug.

The fact that cross stitch is not technically included un-

der genuine tapestry, and is granted its place by custom and courtesy in canvas-work tapestry, supplies sufficient reason for omitting it from this chapter. Of so great importance, however, is the stitch in rugcraft, and so popular, that an entire chapter is devoted to this Phrygian work and its ancient historical background.

Needlepoint tapestry rugs in gros-point were not unknown to the Colonial settlers, though seldom made. Gros-point is merely an enlarged form of petit-point, a stitch in canvas tapestry that is a direct outgrowth of genuine tapestry weaving. It becomes enlarged either because the canvas is coarse, or the stitches are taken over more threads. It is always worked primarily on warp threads.

It may be noted in passing that the name " tent stitch " comes from the frame used to hold the textile foundation. This frame was called a *tenture,* or *tenter,* from the Latin *tendo,* to stretch. The word " tenter " is applied to-day to a machine for the stretching of loom-woven cloth. While this is not likely to be familiar except to textile experts, the term " on tenter hooks " is well known. Embroidery was originally held in its position in its frame by hooks, instead of between two closely fitted rings, as found in modern *tentures,* or embroidery frames.

With the stiffened canvas now generally used in tapestry and other canvas-work rugcraft, no frames are needed. The textile has sufficient body to hold its own. This is an item in favor of canvas rug making. The sole equipment consists of a blunt needle, large enough to take the

yarn. The embroidery is simplicity itself; and since all the materials are easy to get, there is every reason for the vogue of tapestry rugs in America.

In England there is a distinct renaissance of embroidered, gros-point carpets. Ladies of title and rank are gladly supplying designs from their treasured floor coverings in this identical stitch. Some of these needlework carpets of English embroidery in fine stitchery date back to 1690. No less a personage than Lady Walpole embroidered such a carpet.

From the earliest date of these embroidered carpets the work was in the hands of persons of high rank, where it seems to have flourished mildly. The people of Vienna presented Lord Westmoreland, the Ambassador from England, with a needlework carpet of large size as an especial tribute of appreciation. This was about 1855. Lady Suffield is also known to have made an embroidered rug. It is spoken of as a survival of carpet work once popular.

All of these carpets are needlepoint on canvas. The one recently copied is distinctive. It has a design of flowers in an urn, four on each side in panels, while in the center are four panels with diminutive baskets of flowers. The border consists of flowers and leaves coming from a stem that undulates in scroll fashion about the carpet. It is embroidered in strips the width of the canvas, and then the breadths are seamed together.

Many early American needlepoint carpets were similarly seamed to give sizes beyond the possibility of a

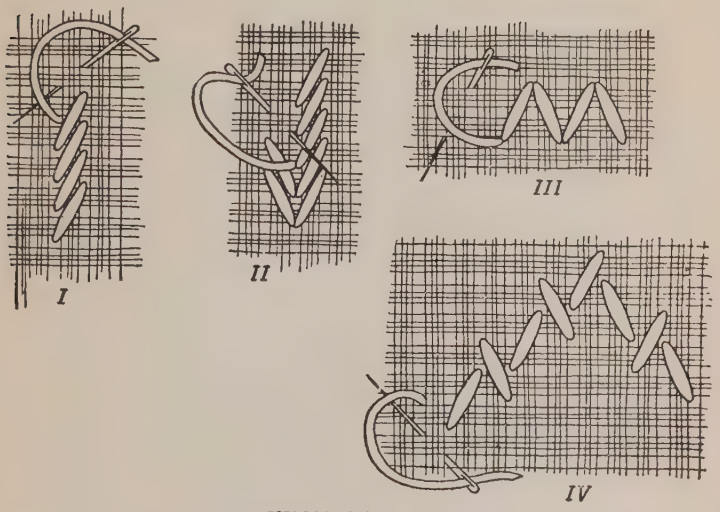
width of woven foundation. It is a method employed in all loom-made rugs not constructed on extra-wide looms, for it is only the latter that can supply seamless rugs.

The vogue for canvas needlepoint rugs has become so definite in America within the past few years that extra-large-mesh canvas is now brought out to facilitate quick work. The kind with but four holes to an inch is one such, and on it rugs can be made with the speed graphically described by the phrase "as quick as chain lightning." The use of the word chain recalls one of the stitches, which has the same name, and by which the Oriental smooth-face Shemakha rugs can be reproduced. The stitch known by the name of the rug is recommended for canvas that is not so coarse and it will be given first attention. It may be mentioned that needlepoint rugcraft of the counted thread, canvas embroidery type, can be done on burlap, as it was in olden times, but the extra trouble involved is now unnecessary, and even futile, for woven mesh canvas is a superior foundation.

The Shemakha stitch of canvas tapestry rugcraft is a variation of tent stitch, so perfect that it rightfully comes by the Oriental appellation. The genuine rug stitch directions can be followed to the letter in needlepoint tapestry rug making. Griffen Lewis describes the stitch in "The Practical Book of Oriental Rugs" as follows:

"The different colored woof threads are twisted over and under the warp threads by means of a needle in such a way that each stitch is made diagonally, taking in two of the warp threads, and leaving every alternate row of

stitches facing the opposite direction, after the herring-bone pattern. On the under side, the shaggy ends of the colored woof threads are left loose." It may be added that the edges are usually overcast and the ends fringed. The designs are chiefly those of the Caucasian group known as Daghestan and Shirvan.



SHEMAKHA STITCH

I, half-stitch; II, stitch completed; III, tricot stitch for straight outlines; IV, for diagonal outlines

A rug maker can follow these directions with a needle threaded with tapestry yarn, different tones being requisitioned as the design requires. The needle is brought up through a hole in the canvas and put down in the second hole above, and the first at right (or left) according to the direction of the line being worked. This brings the

yarn diagonally over two warp strands, as in the genuine weaving.

The yarn ends are left loose on the under side in the needlepoint rug as in the Oriental rug, but they should be worked *over,* for a few stitches when starting a stitch, or run *under* a few stitches when finishing a needleful.

The second Shemakha needlepoint stitch is otherwise known as chain-stitch, as mentioned. It is worked between rows of warp threads, precisely as regulation chain-stitch done over one or two rows of weft. Re-insert the needle in a hole in the canvas and bring it up two holes lower down, holding the yarn under the needle on the surface of the foundation while the yarn is drawn snugly. The work must progress in the same direction, beginning always at the same end of the rug, for in one stitch, the herringbone effect is produced. It will be narrower than in the Shemakha stitch (knitting stitch) first described.

Each row of chain Shemakha stitch must be completed without interruption, for each stitch is linked to the one preceding and the one succeeding it. There can be no skipping about, as is possible in the first type of Shemakha stitch, where isolated stitches may be set to indicate a pattern, or conveniently dispose of a needleful of colored yarn. Each color in chain Shemakha stitch must be introduced as called for in the line being worked and in its prescribed place following the pattern. The medium must be coarse enough to conceal warp threads.

The rug illustrated is typical of Shemakha embroidery of the first type. By comparing it with a genuine She-

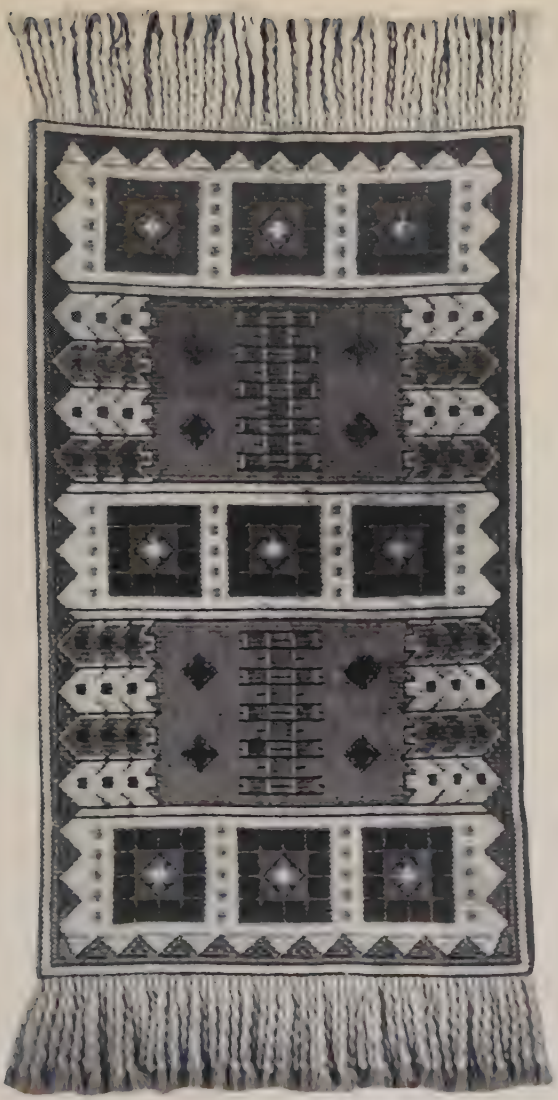
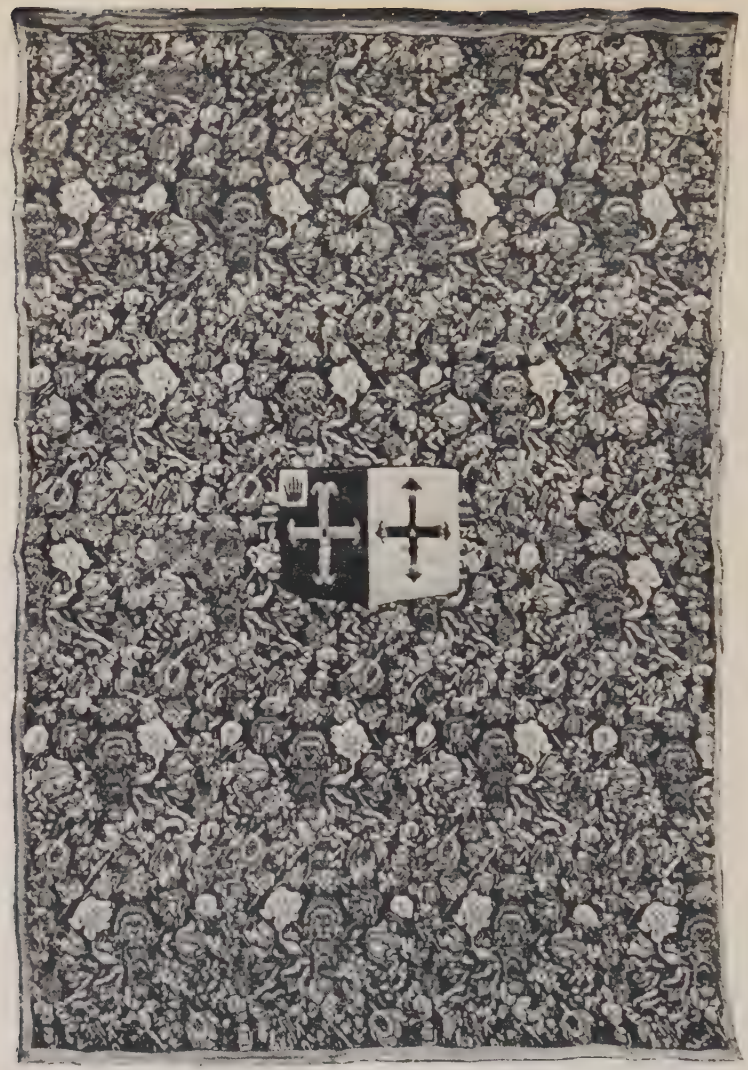


PLATE XIII TAPESTRY RUG IN SHEMAKHA NEEDLEPOINT

The Shemakha woven Oriental rug lends itself admirably to reproduction in needlepoint. The rug pictured was embroidered by the Author.



Courtesy, The Magazine Antiques

PLATE XIV "TURKY WORKE CARPETT"

One of the treasures of the Victoria and Albert Museum, London. Note the date intercepted by the coat-of-arms in the intricate field of English design.

makha rug its close duplication in stitchery is immediately apparent, even to the number of stitches in the linear inch. (See Plate XIII.)

The design has the Caucasian feeling and is wrought in tapestry yarn having the Oriental colorings. The galley and water motifs are suggested in the border while the field has the broad geometric pattern style so often found in Caucasian rugs. The plentiful use of black will be noticed. In genuine Shemakhas it is customary to have outlines done in black. Again correct developments are found in the Oriental red of the field and in the blue, the orange and the light natural wool color.

This rug, embroidered by the writer, has been in use for a number of years as a wall hanging and a table " carpet." One of like size in exactly the same stitchery has been in use as a floor rug for twelve years. It is still in good condition and likely to give much longer service. It took just two weeks to design, embroider, and make the fringe for this twenty by thirty-two inch rug, and to complete it with lining and interlining.

Rugs of this type are choice and also rare. They can be used appropriately with the finest Oriental carpets. As they so closely resemble genuine Shemakhas it is interesting to note what Mary Churchill Ripley says about these Eastern carpets in her " Oriental Rug Book ": " Needlework upon a woven web makes beautiful many of the fabrics of the Orient, notably Bagdad stripes, camel's-hair shawls and the Soumac [1] rugs, from the backs of which

[1] Another spelling of Shemakha.

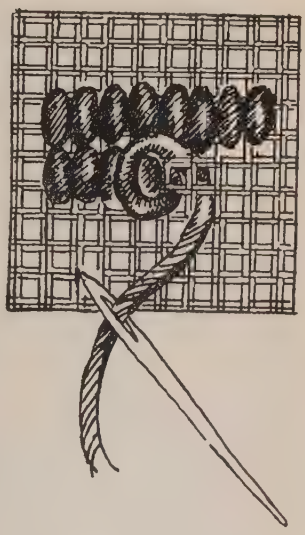
hang the long ends of colored wools used in the weaving and decoration"; and also, "Much greater skill is required to make these delicate tissues of intricate pattern than is needed in the tying in of knots in a pile carpet. . . ." Fortunately for homecraft rug makers, replica Shemakhas can be made easily and quickly, as has been indicated.

When copying patterns for Shemakha rugs it is wise to take them direct from some genuine rug of this kind, for then the stitch requires no adaptation. Do not attempt to make ends duplicate side borders. The stitch is so at variance in its length and width that this presents difficulties. It will be noticed in genuine Shemakha rugs that ends and sides are not alike.

If a cross stitch design or a pattern from a knot-tied Oriental rug is adapted to a Shemakha, consider each point where the stitches in the elongated double stitch join, as the beginning of one stitch. It will be found that the distance from tips at the ends of a herringbone stitch to this point will be equal to a square. This simplifies adapting patterns.

There are several canvas stitches that can be used to advantage in fashioning rugs of the tapestry order. As we have seen, some of them take on names of rugs. Another, besides those given, is known as the Smyrna cross stitch or double cross stitch, and is mentioned here in connection with Oriental nomenclature rather than stitchery. It is made by working a straight cross through the holes left vacant after working a regulation cross stitch,

three holes square: that is, over two rows of warp and two of weft. This heavily padded stitch covers the canvas quickly, and without requiring the extra amount of yarn that would at first glance seem needed. The greater space occupied by a single stitch substantially offsets such a disadvantage.



GOBELIN STITCH

Tapestry rugs of distinction are made from the stitch interchangeably called Gobelin and tapestry stitch. For rugcraft, the wide Gobelin stitch should be used. It is a vertical stitch, covering two, three or more threads, instead of only one, as in regulation tapestry or Gobelin stitch. The length of the stitch suitable for making rugs depends upon the size of the canvas employed. It should be long enough for all rows of stitches to be clearly defined, but not so long that they prevent a firm, substantial texture. Three-quarters of an inch is advised.

This stitch is a favorite in raffia embroidery on canvas imported from Italy in the shape of bags, cases and purses. Instead of this raffia medium, rug yarns should be used, or strands cut from one-quarter to one-half inch wide from silk or fine lisle stockings, or closely woven

Jersey cloth. This medium may be used in other tapestry rugs when the foundation is sufficiently coarse. The strips may be cut either on the straight or bias. If the latter, use the one-half inch width. Rugs in any of these mediums other than yarn immediately slip from the needlepoint tapestry group into the group of rag rugs.

The embroidery is done in parallel rows of straight stitches of equal length, so spaced across the rug that they form crosswise rows of sharply defined indentations. This is the opposite structure of Japanese straw mattings. Colors can be introduced at will in any length of stitches that does not infringe upon the indented, linear construction; or they can be worked regardless of it, though the background must never depart from the precision of parallel stitchery which is germane to the Gobelin rug work.

Each stitch is taken its full length on the right and wrong side of the rug, the under part thus forming a padding for the upper and supplying durability to the rug surface. The top of the stitch is straight, which is exactly the reverse of Shemakha rug stitch. Each row of stitches begins in the top holes of the preceding row of stitches, thus forming an uninterrupted rug surface, completely concealing the foundation.

The extreme simplicity of the long stitch tempts the rug maker to fashion one of these unique floor coverings, especially as it is apparent that one can be made in a short time. Extra beauty is gained by heavier padding of stitches. An easy way to do this is to work over a strand

of wool, flannel, domett-flannel or outing-flannel. Strips may be torn. They should be a trifle narrower than the length of the embroidery stitch. Braid or tape may be used, if preferred, or any soft strands of lightly twisted cotton cord or yarn.

It is not the Gobelin stitch just described that alone is done quickly. All needlepoint tapestry rugs can be constructed with speed and ease. There is, moreover, a fascination about the embroidery that has kept it always popular. So choice is the work that it is still sometimes referred to as "court" or "royal" embroidery. It was a work of court ladies, and because of its close association with the nobility at the time when every lady of rank and leisure plied her embroidery-needle skilfully, in gay or troublous days, there is an atmosphere of romance about it. The rug maker who includes a needlepoint tapestry rug among her floor coverings has one in a craft of ancient prestige, of regal ancestry, and of beauty that belongs to every age.

X

"TURKY WORKE CARPETTS"

After the lapse of two centuries, "Turky Worke" is enjoying a renaissance, the previous revival having been in the 18th century. It is reputed to be the first needle embroidery devised to duplicate the pile of Oriental carpets. "Turky Carpetts" was the original name by which these rugs were known in England. Travelers and traders who went to the Orient brought back tales of the gorgeous textiles, together with occasional rugs, though at just what date this practise began, it is impossible to ascertain, as authorities differ. It would appear that pile carpets did not enter Western Europe until the fourteenth century and it was not until the eighteenth that they took any conspicuous place as floor coverings.

There is a pretty story, accorded to be fact, to the effect that Oriental carpets were introduced into England when Catherine of Aragon went from Spain to become a royal bride. Her brother fitted up the special suite for his youthful sister in the palace, and the magnificence of it has sounded through the centuries. Together with other appurtenances, he had Oriental rugs imported to impress the English with the glories of the Spanish court and supply the sort of lavish setting which he deemed worthy of his royal sister.

Early in her career Queen Catherine turned her attention to embroidery, for which her native country was then so justly famous, and eventually she became one of the most notable of the group of queens who excelled in needlework. Once, when on trial as the first queen of Henry VIII, she was so hastily summoned before Parliament sitting in judgment, that there were, about her neck, colorful strands of the embroidery silk which she had but lately been employing. Queen Catherine's embroideries proved the solace of those unhappy days, as they had been the delight of her happy ones. Since " Turky Worke " had then begun to appear, it is possible, though not certain, that Queen Catherine may have employed the stitch. It will serve to fix the date of the invention of this form of embroidery in the minds of Americans in particular to recall the fact that Queen Isabella, under whose patronage Columbus discovered America, was the mother of this English Queen.

As early as 1549 inventories recorded " borde carpets & foote carpets of Turkeye Work, old and woryne." It is not surprising that the exquisite Oriental carpets fired the imagination of art connoisseurs and craftsmen, and that they immediately sought to discover the stitchery and reproduce its effect. So closely upon the appearance of these carpets, did English " Turky Carpetts " spring into existence, that in 1570 is found the carpet of Lord Verulam, known throughout the world in the realm of needlecraft. Its typical Elizabethan pattern proclaims it to be

the work of English craftsmen, skilled in a manner to bespeak long practise.

The conclusion is not to be drawn that " Turky Carpetts " were needle stitchery on a finished textile, for mention is made of the warp being of hempen cord. This reference to a warp indicates that the knots were tied directly upon it, and that a weft was woven every few rows as in Oriental rugcraft. This method of making the earliest type of Turkey Work cannot have differed in any appreciable way from the work in the Far East, for the knot in both is that known as Ghiordes. It was the process of making the knots and the duplication of the stitchery in " Turky Carpetts " that was responsible for the name Turkey Work in English.

In England, Ireland and France, carpets continue to be made to this day in practically the same workmanship, though they are not called by the same name, but are known as handtufted carpets. The Ghiordes knot is used as in " Turky Carpetts." The prices that these carpets command put them beyond the reach of any but the wealthy. Nowhere have I found the cost less than forty dollars a yard, and from this the prices soar to two hundred and sixty dollars a square yard for the rare Savonnerie carpets and rugs. Yet it lies within the power of homecraft rug makers to produce like effects in Turkey Work done on canvas with no more expenditure of time than required for other compact stitchery.

" Turky Worke " was originally embroidered on a coarse and very strong hempen textile, resembling burlap,

which latter fabric, however, is of jute, and not of like durability. The old textile was not meshed, and the work had to be done on carefully counted threads. A high grade of burlap can be used now, but a rug maker would scarcely choose it when meshed linen canvas is available. This is the recognized textile appropriate to Turkey Work in the present renaissance. On it the embroidery can progress much more rapidly, as the threads are already counted, and divided by spaces for stitches.

Today the term Turkey Work is definitely associated with embroidery done on the warp of canvas, preferably that woven with two threads in each cross-bar. Although done on a previously woven textile, and not on the warp threads of one in the process of making, the knot is the same. It is well to remember that the term " Turkey Work " has a double technical significance.

In antique " Turky Worke," the pile is short, oftentimes being no longer than that on many genuine Turkish rugs. By examining these textiles, the comparative shortness even of those known as having a deep pile, is immediately recognized. Attention is especially directed to this feature, as there is an erroneous tendency in modern Turkey Work to have the pile much too long. Apart from the fact that these long strands are not true to type, there is a definite disadvantage in having them so, as the pattern is not brought out with the same clearness in a long-pile fabric as in a short. Fortunately the short pile is just as easy to fashion. Incidentally it may be mentioned that a modern piece of Turkey Work,

with its shaggy pile, can be distinguished at a glance from an antique. There is no reason, however, why modern work cannot acquire the rare beauty of antique "carpets" when colors are wisely chosen, the stitch correct, the pile not too long, and the pattern consistent with antique examples.

There are many sources from which designs may be drawn — from Turkish rugs direct, from Elizabethan patterns, and other old English patterns. One "Turky Worke" chair in the Boston Museum of Fine Arts is in bold floral design in softened tones of red, some of which shade to pink, and are intermingled with blue, lemon yellow, green, both in yellowish and bluish shades, and black, the latter almost gone. That it should be, is not strange, for black is an unstable color even in old Oriental rugs, the dyes supposedly being the cause for its giving out before the other colors. This English chair referred to is of the period of James II. It is described thus fully, as it indicates one type of appropriate pattern, together with colors suitable to modern Turkey Work. In some of the old inventories specific patterns are mentioned, some of which date back to Henry VIII. These include "cowcumbers, cabbages, trafles, trifoils, and pyramids," the last a design much in evidence in the period of James I.

The stitch of Turkey Work consists merely of two short backstitches, so worked that together they form a Ghiordes knot taken through canvas or some other suitable textile. The simplicity of the stitch makes it easy

to understand how little children of the Orient can make rugs, tying the knots as readily as do adults. With equal ease can the homecraft rug maker fashion rugs that reproduce a like fineness of texture and pile. If she so chooses, identical patterns can be worked. Each knot stitch is as separate in the canvas Turkey Work as in a genuine Turkish carpet made in the Far East.

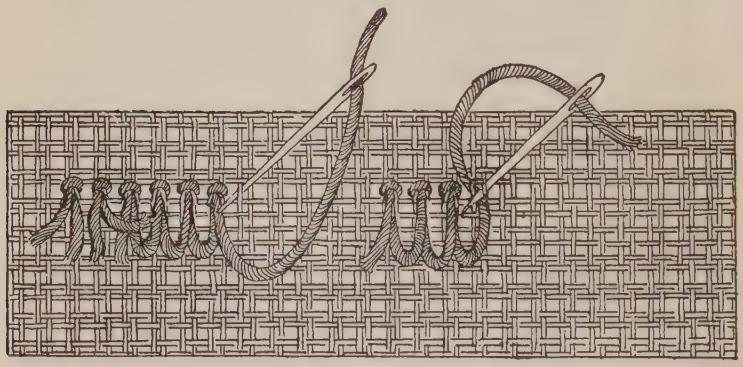
Penelope canvas in size double ought (oo) is excellent for the foundation for modern rugs. Each completed knot stitch covers two threads and occupies one bar of the two-threaded weave. If a larger stitch is preferred, use a finer canvas, single ought (o) and have each completed stitch occupy a width of two bars and be taken with double strands of yarn. This does not make the pile any coarser, because the yarn is equally fine. While the stitchery progresses faster, it requires some added care to keep both strands even. Extra-size yarn, known as rug yarn, may be used, but does not give as beautifully fine a pile.

There should be as many large, blunt, crewel needles for the work as there are colors of yarn in the pattern. Before starting to embroider, thread as many needlefuls of different colors as will be needed in the rows to be made. Do not attempt to use only one needle, and thread and re-thread it with each change of colored yarn.

Start the stitchery in the lower left-hand corner of the rug pattern, and work in consecutive rows, always from left to right, until the final stitch is set in the upper right-hand corner. The rug will have a close, rich pile.

To make the stitch of Turkey Work, take the two

backstitches over warp threads between the same rows of weft, or along the same line of holes in the canvas. The first stitch is taken about a left-hand warp thread or bar of canvas, and the second about a similar thread or bar on the right. The stitch begins and ends in the identical hole. The transverse stitch comes across and above the two ends, which ends form the pile. To insure this hori-



TURKEY WORK STITCH

zontal (transverse) stitch always lying across the top, the yarn must *always be below* the needle when the *left-hand stitch* is taken, and *above* the needle when the *right-hand stitch* is taken. This order cannot be neglected, for thus only is the knot formed. By examining the diagram showing the Ghiordes knot and the Turkey Work knot stitch, their duplication is apparent.

An end of yarn must be left below the stitch when begun, and again when finished. These two ends form the pile, and they should be as long as the pile is to be deep.

In Turkey Work it is not necessary to cut the yarn after each stitch is completed unless the pattern calls for a change in color. Consecutive stitches can be taken by allowing the yarn to remain in a loop between one stitch and the next, the length of the loop being equal to the depth of the pile. When the loops are cut through the center, half of each loop strand will form a strand of pile in the knot stitch next it, and each knot will be a separate entity.

The depth of the rug pile may be anywhere from three-eighths to one-half inch, according to the size of the yarn and coarseness of the canvas. It can be accurately gaged by having the ends of stitches or the loops between them always extend as low as some special row of weft threads in the canvas. Or a gage, technically known as a " mesh," may be employed and each loop be taken over it. If the mesh is used, it is held flat against the canvas, with the top touching the line along which the stitches are being taken.

Originally the English " mesh " had a knife-blade fitted into one end. After the stitches taken over it in a row were completed, the blade was brought into use at the bottom of the loop, and the yarn automatically cut as the " mesh " was withdrawn. For present-day rugcraft, the " mesh " has been revived, although its name is varied, sometimes being called a " stitch gage," again a " rug-stick," etc. A narrow ruler, or a steel such as corsetières use, can be substituted for a regulation mesh, if one is not available.

The pile is cut by running a sharp knife through the loops, several at a time, and drawing it out so that it severs the loop ends. Shears can be used in the same way, by running one blade through the loops and cutting many at once. When the loops have been evenly and accurately gaged and cut, the pile requires no more evening off than can be done by snipping off any ends that are higher than the rest. There is practically no waste of yarn.

The selvages of early English "Turky Carpetts" were in plain weave, turned back and sewed on the under side of the rug. If the canvas foundation of Turkey Work rugs of to-day is turned back, it must be covered with a flat tape, felled down along each edge. The weave of canvas is too loose to be left uncovered. Another way to finish edges is to turn back the canvas for three rows of holes, making the turning along the pattern edge. Baste in position, and take the knot stitches of the embroidery through both thicknesses. To do this, the canvas must be turned back evenly so that the holes are over one another.

The ends of rugs should be finished in one of these ways. They may also have fringe, using the yarn of the stitchery, in some one of the neutral colors, for the purpose. Another excellent finish is given the rug ends by braiding the yarn strands pulled through the canvas before it is turned back. These fine braids are found on some Turkish rugs. When fringe is to be made, one extra row of holes should be allowed for it at each end be-

low the line of the pattern before the canvas is turned back.

There are several pile stitches that can be employed in rugcraft on canvas, but none that has the historic background of the stitch of Turkey Work. Single knot stitch, also called Smyrna stitch is exactly like " Turky Worke " stitch. It is so termed for the reason that Oriental rugs came to be known as " Smyrna rugs " in England, after the former name " Turky Carpetts " fell into disuse. Single Maltese stitch is also identical with that of " Turky Worke " but it is made with many strands of rather fine thread as a medium, and so assumes the character of wee tassels rather than knotted stitchery.

Double Maltese stitch, and double Smyrna stitch are actually two knot stitches, taken one above the other. In making the knot, carry the yarn *under* the yarn end (left at the beginning of the stitch) and in repeating the stitch, let the yarn form the transverse or retaining stitch across the *top* of all the stitches. When the loop is cut, there are four strands of pile instead of two. The space left between rows of stitches is twice that between single knot stitches. Therefore the work progresses as rapidly with the double as with the single knot stitches after the knack is acquired. There are other stitches, known as tassel stitch, plush stitch, fringe stitch etc., any of which can be used if the rug maker so chooses. The pile can be cut when the stitch is knotted or is sufficiently firm. Otherwise it should form a loop pile.

All the rugs described are of ancient origin, but there

is a new one that comes from Australia with a knotted pile made through canvas. It is constructed with a latch needle similar to the latch-hook needle used in the manufacture of knitted goods. As it can be made as adequately with a crochet hook, this is the tool of construction here considered. Those familiar with stitchery will immediately recognize this stitch as archaic chain-stitch worked by the primitive people with a hooked needle through a fabric. In the modern work, canvas with its conveniently spaced meshes takes the place of the plain textile. The wool yarn medium is cut into very short lengths. As each stitch is taken separately, a pile surface results and the whole is reminiscent of hooked rugcraft. But there is a difference of approach, since the stitch harks back to chain-stitch, worked with the medium *above* the foundation, while hooked work comes through tambour work in which the medium is held *beneath* the foundation.

Each stitch must be taken in the same direction, which may be horizontal or diagonal. The Australian stitch is the former, and is taken about the warp, the medium passing through the holes in a horizontal row for each succeeding line of stitchery. While this same order may be followed, the diagonal stitch has proved more satisfactory to the writer. It is the one used in the rug section illustrated. In this, each stitch is taken diagonally across the square formed where warp and weft are interwoven. The pile surface is exquisite, but no less so than the under side, which displays even rows of what appear to be tent

stitches, often called half cross stitches. (See sampler C, Plate III, and sampler B, Plate V.)

To make one of these rugs, lay the foundation on a table so that the canvas is smooth and flat. Turn over the upper and lower edges to the depth of three rows of holes, which must come precisely over the ones beneath them. Baste with large stitches. If the sides are selvages, they can be left without turning over onto the front of the canvas, but if not they also should be so turned and basted. The outer rows of stitches are taken through the doubled canvas, supplying extra durability and a fine finish to the rug edges. The yarn should be used in double strands for the two outer rows, increasing their strength still further.

Place little piles of yarn, cut into two-inch lengths, on top of the canvas, having the colors such as will be needed for the rows of stitchery to be taken. The pattern should be in full view of the rug maker. Start the stitchery in the lower left-hand corner of the canvas. Double one or two strands, according to the row being worked, and insert the crochet hook under the loop. Put the hook through the second hole in the first row of holes and bring it up through the first hole in the second row, that is the one nearest the left-hand edge of the canvas.

Catch the yarn, which is held by the finger and thumb of the left hand, and draw the ends through both holes and through the looped yarn. By this operation the ends of yarn are tied in a knot and also simultaneously released. The upstanding ends of yarn form a pile stitch.

Continue to make row after row of such knot-tied pile stitches until the entire rug surface is covered with them in the colors determined by the pattern.

If the rug is to be kept true to Oriental type, the design must of course be Oriental. Motifs from genuine Oriental rugs can be copied readily by counted stitches, if the rug is turned wrong side up, and the design is taken off on draughting (cross-stitch) paper. Keep the pattern simple, using few motifs. Gain variety by transposing colors in different motifs. Avoid numerous colors. Study Oriental rug tones and note the few that are used and the wide variety in effect that these Eastern people get in the way described.

The beauty of the under side of the rug makes one hesitate to hide it under a lining, but linings have the advantage of saving the rub of stitches against hard floors. The tread is softened and the wear is lessened. Denim makes an excellent lining, if one is used. As "Turky Carpetts," when genuine, are never lined, and those of Turkey Work are as often found without as with linings, the rug maker has her preference as guide.

After the rugs are sheared, in whatever stitchery they are fashioned, remove the fuzz with a rotary motion of the palms, pressing them gently but firmly against the pile. This pressure promotes felting and adds a fine surface finish. It will be remembered that part of the process of "treating" an Oriental carpet to impart a silky sheen is to run it between heavy rollers that are heated. While the hand pressure combined with the

warmth of the palms under the slight friction, cannot be expected to supply any comparable finish, it does bring out the beauty of the design and add a certain fineness to the finish and clearness to the colors. This is partly because it brushes away straggling tips of yarn and partly because it eliminates the fuzz. It is to be expected that all of these exquisitely fine sheared yarn rugs will " shed " somewhat, for a time after they are made. Genuine Oriental carpets do the same.

In all of these rugs, thrift may be exercised by using yarn raveled from knit and crocheted articles. The yarn should be straightened before using, if it is crinkly. Otherwise an even pile is impossible to attain, and no rugs except those made to imitate some types of fur rugs should have anything but straight pile. Such fur effects can be gained in ravel knit pile, in which strips are one and one-half or one and three-quarters inches wide and are in natural wool tones. All Oriental pile should be straight. To take the kinks out of previously used yarn, wet it and wind into a ball while damp. An even better method is to wind the yarn loosely over a thin board, such as a shingle, for the strands will be kept taut and straight as they dry.

In all the various pile rugs described, however excellent each may be, there is none that has the prestige in rugcraft that belongs to " Turky Carpetts," for in them the Ghiordes knot is actually fashioned through canvas. Notwithstanding all the centuries that have passed since this stitch was evolved, it alone remains the perfect re-

production of Oriental pile knot in embroidery. It has come into its own again with the revival of interest in all types of handmade rugs. With it choice replicas of knot-tied rugs can be made at home. Their cost need be no barrier, as has been demonstrated. Rugs of Turkey Work are for the finest rooms of a house, however spacious it may be, or however handsomely furnished, for by right of beauty of craftsmanship they belong with genuine Oriental carpets.

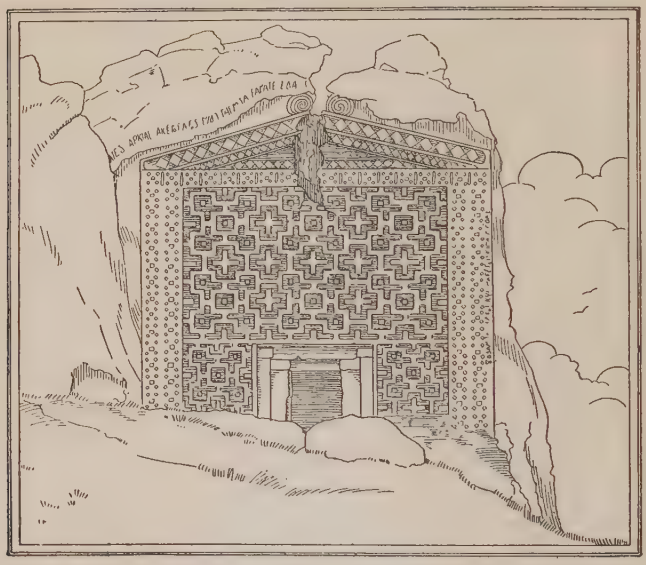
XI

RUGS OF CROSS STITCH OR PHRYGIAN WORK

To connect so " modern " a thing as cross stitch with the twilight history of a pre-historic people is indeed strange. But to have reason for belief that the identical stitch appeared in carpets of the ancient Phrygians and Cappadocians, probably as early as the seventh century B.C., over 2500 years ago, is even more staggering. This is especially noteworthy in view of the fact that cross stitch floor coverings, when made to-day, are considered in the light of novelty.

According to research in the archæological lore of carpets and rugs, the finding is grounded in fact. It appears that there are monuments and tombs of the Midas tomb variety — and chief among these, one with the mythical name of " Midas " inscribed on it — that present designs obviously copied from patterns employed on cloth and carpets. It is difficult to consider going back farther than the Phrygians, if we credit the legend that they were the first people to inhabit the earth, and the originators of language. Little as we can believe the tales, it is curiously true that excavations frequently corroborate incidental traditional details, and present-day events establish links of union with past ages. In the matter of the carpets, the sculptured patterns referred to, and the her-

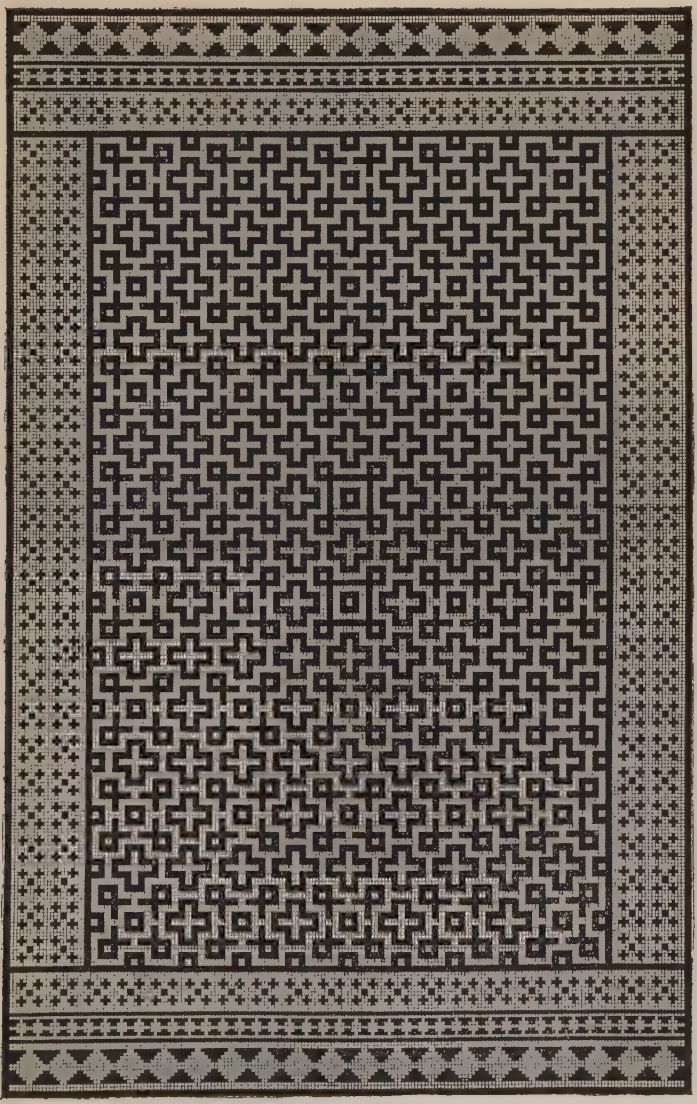
aldic designs, are so unrelated to those employed by other of these remote peoples as to establish their identity as of Phrygian type. Moreover, to-day in certain regions that correspond geographically to this archaic section, there



MIDAS MONUMENT

appear occasionally in peasant homes carpets having the same variety of geometrical design. Thus does contemporary home decoration verify archæological investigation.

The rug illustrated is a faithful copy of the frontal decoration of the Midas tomb, which is supposed not only to be a design taken from a carpet, but to represent in



PHRYGIAN RUG

Midas Monument design re-translated into rug stitchery

low relief and as well as the material permitted, the fabric itself. It was customary, when persons were notable, to hang carpets before entrance-ways and on walls, and Midas was honored by having one simulated on this, his monument or tomb.

It is considered not unlikely that the surface once was in colors, probably red, blue, white and black, thus presenting an even more realistic representation of a textile. To-day no color is found on the Midas tomb; but on one known as the Delikli Tach there are signs of polychrome treatment after the lapse of thirty centuries.

If, when working the rug pattern given, the design be carried out in black against a background of earth-red, the combination would approximate one of the early era. Or, again, old blue with black, or indigo-blue with earth-red, would be true to type. These, or other old tapestry hues, should be employed, unless warm greys or neutral rock tones preserve in the textile the hewn-stone semblance. But always the color contrasts should be pronounced to bring out the marvelous beauty and subtle intricacies of the pattern.

Every stitch in this choice rug has been so carefully worked out that the design is as easy to follow as any other cross stitch pattern. To the scale of ten stitches to the linear inch in which it is developed, the finished rug measures eighteen by twenty-seven inches. On canvas six, seven or eight stitches to the inch, the size is proportionately increased; while on the four stitches to the inch

canvas, the rug becomes large without any increase of labor.

The meander, the star formation of squares, and the cross, are motifs immediately apparent. The lozenges are supposed to represent joists, though, "Lozenges, squares, crosses, meanders, and all forms that ornament these sculptured fronts, are of the kind the looms and the broiderers of Asia Minor produce at the present day . . . on those justly prized carpets made in the provinces which answer to the Lydia and Phrygia of olden times." [1]

To revert again to the cross stitch, though it would not have been used on carpets at its earliest invention, it is accepted as one of the stitches used in the embroidery of the hangings or "curtains" of the Tabernacle described in Exodus (chapter 28) 1491 B.C. The Jewish stitchery came *later* than the Phrygian. That it is a stitch eminently suited to floor coverings is evidenced also by the Spanish seventeenth and eighteenth century and the Colonial eighteenth and nineteenth century cross stitch rugs and carpets.

The name of the primeval city of Phrygia is still connected with cross and half-cross (tent) stitch, for in the language of classic stitchery it is known as "Phrygian work." Since the Phrygians and Babylonians were the founders of embroidery, it is close to impossible to trace anything earlier. The stitch, from the earliest era to the present day, has remained identical, although called by varying names — Pointe de Marque, plaited Slav stitch,

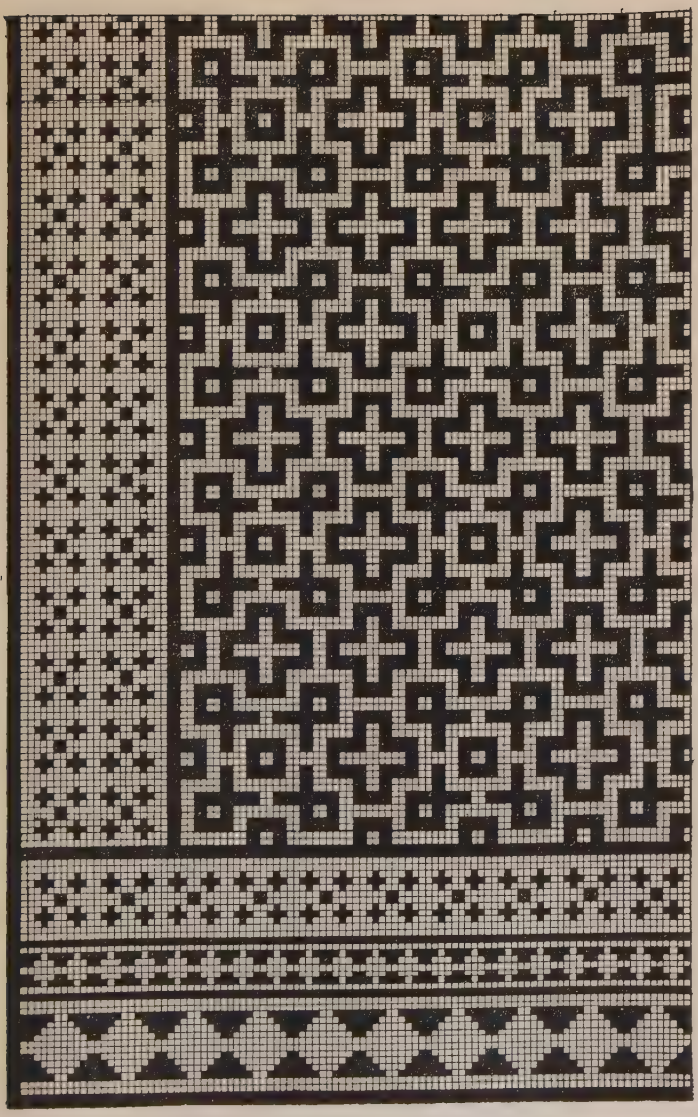
[1] *Art in Phrygia, Lydia, Caria, and Lycia,* by Perrot and Chipez.

canvas work, Montenegrin cross stitch, etc. To know such terms aids in the adapting of designs to rugcraft; for, by whatever name called, whenever the stitch is a square cross stitch, the design in which it appears can be copied in rug making. It should, of course, be appropriate, and the materials suitable, such as heavy yarns on cross stitch or tapestry canvas.

It is possible, though less easy, to adapt elongated cross stitch, such as the Persian. Its shape requires special calculation on the part of the rug maker. The size of a rug or carpet, in either case, depends on the size of the pattern employed, as well as the size of the canvas weave and number of " repeats " in the pattern. It is by means of repeating a design that a rug can readily be made to suit the floor space for which it is intended.

Apart from the classical considerations of carpets in cross stitch, it should be emphasized that the work is eminently suited to the embroidering of rugs to-day. The stitch is of double thickness, as the name implies. The under stitch acts as a padding for the upper on which the footfalls come, thus relieving the wear and tear, to a marked degree. It was because of the extra durability of the work that cross stitch was used on kneeling-cushions for churches, thereby being confused with the regulation " cushion stitch " which is similar to cross stitch.

When taking designs from Oriental rugs there need be little variation. In the Eastern handweaving there are slight discrepancies, as the depth of a stitch is a trifle less than its width; but this in no wise interferes with the



SECTIONAL PATTERN OF PHRYGIAN RUG
Showing one-fourth of design

copying of the work, stitch by stitch, in the square mesh of the cross stitch.

One of the notable advantages in cross stitch rugcraft is its diversity. Rugs with the flavor of genuine carpets of the Orient are not the only ones that lend themselves to the technique of the embroidery. Floral rugs can be realistically presented, in which the flat surface may be varied by introducing some one of the several raised or pile embroidery stitches, with or without sheared loops. To get such an embossed effect in some of the old cross stitch rugs of this country, rug makers, puzzled about this technique, resorted to pulling strands of yarn through the interstices of the canvas, previously embroidered, allowing the ends to project slightly.

Among these early American floor coverings, treasured in museums and private collections, are to be found cross stitch carpets, hall and stair runners and rugs. One carpet (Plate XXI) in the Metropolitan Museum of Art, New York, was made about 1800 by the wife and daughters of Judge Pliny Moore, for their family mansion in Champlain, New York. The stair carpet to match is in the possession of Mrs. Robert Soutter, of Boston, a great-granddaughter. The set of floor coverings for drawing-room, hall, and stairs remained in use for generations, for Mrs. Soutter can remember running down the stairs and over the carpets when she was a little girl visiting her grandmother.

The history of the making of these carpets is interesting. It took four years to complete the embroidery on the

set. The widths of linen foundation are completely covered with cross stitchery. Owing to the inherent precision of cross stitch and the careful planning of the design with its Greek fret border, the pattern comes together without discrepancies when the widths are sewed together like breadths of carpet, loom-woven. All the materials were homemade. The wool used in the embroidery was from sheep raised on the estate. It was home-dyed in tones varying from a rich cream to a mellow, dark, wood-brown, the dyes being brewed from the roots and barks of trees on the place. The linen foundation was from flax grown and harvested in the fields and spun and woven into cloth by the family.

This work was always done in colonial days by the gentlefolk of this country, just as much as the embroidery. In England and Europe the latter was the chief accomplishment of ladies of the court, under whose expert skill the stitchery held its place in the realms of art. It was "fancywork," as distinguished from plain sewing. In America, also, embroidery has always been done by women in their leisure moments. "Though on pleasure she was bent, she had a frugal mind" may well be said of every artistic woman who in the pioneer days of this country turned her skill in needlecraft to the making of floor coverings. To-day there is no more practical nor beautiful form of this applied stitchery than cross stitch carpets, runners and rugs.

The fact that the cross stitch carpets in question, after having served as floor coverings for years, are still in ex-

cellent condition and quite ready for further use, should it be required of them, bears witness to the durability of cross stitch carpets, made on stout foundations with a stitch that is not too coarse. Even the fact that "parlors" were rooms of state, seldom lived in, that back entrances and stairways were used in preference to front halls and front stairs, does not discredit this evidence. A floor covering that can withstand the tread of hard leather soles and stiff heels has an enduring quality. Oriental carpets never have to stand such usage in their native lands. It is only with unshod or slippered feet that the Orientals walk on their exquisite handmade rugs. It takes the Occidental to treat floor coverings in this harsh manner. Fortunately cross stitch carpets have the needed durability to a marked degree.

In reference to the foundation fabrics best suited to cross stitch rug making, there still is nothing equal to a hand-woven linen. However, this is now difficult to get, as well as expensive to buy. One of the best modern fabrics is Aida canvas, known sometimes and in some localities abroad as Java canvas. It is a particularly strong-weave, stiffened canvas made of several strands of warp and weft between the holes. Ordinary canvas, variously known as tapestry and cross stitch canvas, does not have as many strands of warp and weft, and is not quite as desirable, because of this looseness of weave, though it is often used. In this, there comes an extra-coarse weave, brought out especially for modern rug making. It has but four holes to the inch. On it the heaviest rug yarns are needed, or

their equivalent in those not quite so coarse. Cross stitch wrought on counted threads was done in some of the Colonial rugs on burlap instead of linen. It is true of this jute material that when used as the filling in certain Oriental rugs, durability is sacrificed to low cost. The ancients who made cross stitch carpets used linen foundations, and the Colonial rug makers used it also for this stitchery. The embroidered carpets are choice and deserve foundations that will be as enduring as the stitchery. It is for this reason that Aida canvas is advised.

Jersey cloth, and other knit-woven fabrics, can be cut in three-eighths inch bias strips, and be used in place of yarn on the wide-spaced canvas. Also it is possible to use other soft weaves of cloth, cut in such widths as can be drawn easily through the spaces and conceal the foundation when the stitchery is complete. Whatever the working medium, when used on ordinary canvas, it must hide the goods; but in the more decorative varieties such as Aida canvas, the field of the rug may be exposed, and a border with a medallion center complete the embroidery. The field may have cornerpieces as well as the medallion, as is customary in Oriental rugs. Or the field may have smaller motifs scattered over the surface.

As will be seen, the amount of stitchery may vary and therefore it is possible to make a cross stitch rug in an amazingly short time, and in as thrifty a way as any "thrift" rug. A blunt crewel needle with an eye sufficiently large to take the medium should be used. Or a bodkin may be substituted if strips of fabric are used.

Since cross stitch is one of the earliest embroidery stitches and has remained popular throughout the centuries, to describe its method seems futile. Yet there are certain little quirks that must be given attention if perfection is attained. To know them, the rug maker has to be thoroughly acquainted with the method of making cross stitches. For one thing the stitches when embroidered consecutively should be made in pairs, or else in two journeys. Each stitch occupies a square surface of a foundation fabric and is comprised of two slanting stitches crossing exactly in the center. To make, bring up the threaded needle through the lower left hand hole, down at upper right, up at lower right, down at upper left, completing one " stitch "; the next one is taken in reverse order — up at upper left, down at lower right, up at upper right, and down in lower left, thus completing the second stitch; leaving the needle ready to start work again as in the first stitch. The back of the work shows a meander; the right side, the cross stitches. Not only is this the easiest way to work, when each stitch is completed as the work progresses, but not a bit of yarn or other medium is wasted. Isolated cross stitches are made in a similar way.

Grounding — that is, stitches taken on a background — is best made by working all stitches in one direction at one time or in one journey across the goods, and those crossing them in a second journey. This is the quickest way to work long rows of one color. Throughout all the work, whether in grounding or design, all under stitches must go in the same direction and all upper cross stitches

also in parallel rows. Exquisite patterns have been marred to the eye of the expert by stitches embroidered regardless of this precision of direction. The worker evidently assumed that, as the stitchery is geometrically square, its direction of lines was of no consequence. But, like the nap of cloth, they must run the same way, or blemishes are readily apparent. In rugcraft, the work is heavy and coarse rather than fine and minute, and so blemishes stand out distinctly. Fortunately, the right way is the easy and the economical one, and the stitch itself one of the easiest ever devised.

A cross stitch rug requires a lining, and if an interlining also is added the rug will last longer and be more luxuriously soft. Canton flannel, or double-faced domett-cloth, is excellent for the interlining, and denim for the lining. Burlap does not last as long as the rug. This I have found by experience.

When the embroidery on the rug has been completed, lay a damp cloth over the wrong side of the embroidered surface and press, having a soft cloth over the ironing-board, under the stitchery. When absolutely dry, put the interlining in so that it comes to the edges without being turned in, and baste securely. It is well to tack it with stitches invisible on the right side of the rug. Turn the unworked edges of the rug back over the interlining and then put on the lining and baste it along the edges, leaving sufficient space to turn back a hem in the lining. Fell the hem along the edge.

If fringe finishes the two ends, make it directly in the

rug foundation through the holes close to where the embroidery stops. Use six or seven strands of ordinary three-ply yarn or its equivalent. Turn in the hem close to the fringe, which will then extend beyond the rug. The fringe should be made after the embroidery is completed and before the rug is pressed or lined.

In turning from the details of technique in cross stitch floor coverings to individual types of rugs, we find three deserving special attention, besides the Midas rug previously described. They are the silhouette and figurine rug, the Assisi rug, and the map rug.

Silhouette and Figurine Rugs

The modern silhouette rug takes it name from the type of design, which may be portrait or figurine delineation. No aid to portrayal can be supplied other than that of the edges of one color against the background of different hue. So decidedly must colors accent each other that a definite impression of the shape and substance of natural objects, rather than geometric motifs, is conveyed. Black against white or cream is the regulation silhouette combination, and it is apt to appear in silhouette rugs. But color schemes to match or harmonize with the color scheme of a room are excellent, provided they permit the necessary sharp contrast to bring out the pictorial quality.

In figurine rugs more latitude is permissible if the rug maker chooses to introduce color harmonies. The shades

SAMPLER SILHOUETTE RUG

Designed for cross stitch, but equally well adapted to pile knitting, or duplex crochet

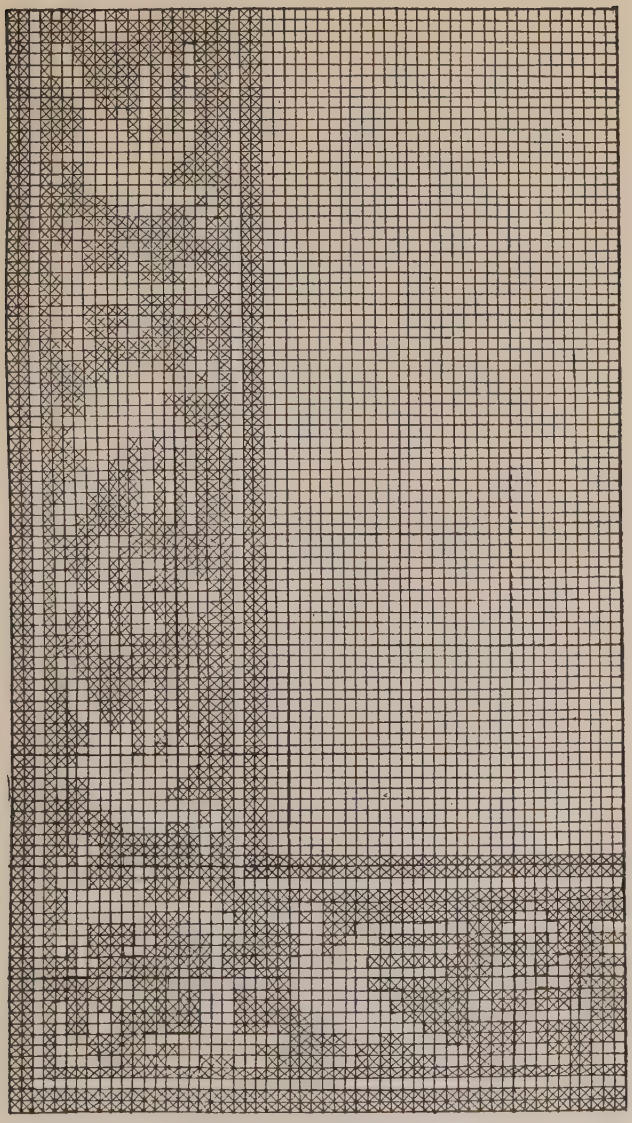
must be flat colors, with no attempt to indicate shading. A costume may be in one color with bands of a contrasting hue. Posies may grow on green stalks. Color must be in masses, as is consistent with the character of silhouettes. The background stitchery must throw the silhouettes into relief.

Silhouette and figurine rugs are sometimes wrought in other types of stitchery than cross stitch. It is quite possible to make attractive hooked, knit, crocheted, etc., silhouette rugs, provided the work progresses by counted threads or stitches. It is only thus that the required precision of delineation is accomplished.

Just as a painting calls for a frame to set it off to best advantage, so do these fabric silhouette rugs require some sort of frame to carry them to satisfying completion. This frame does not have to be anything more substantial than the rug border, which serves the purpose admirably. And because these rugs have such compelling pictorial quality they appear as fitting for wall decoration as floor covering. This is reversing the order of the earliest rugs, which were wall decorations prior to being placed on the floor.

The Assisi Rug

The Assisi rug is a distinctly modern floor covering employing two stitches which combine — in a " positive " or worked background, and a " negative " or unworked design — to make Assizi work. It is so named from the



ASSISI WORK RUG BORDER

With positive background and negative design

Italian city where it is chiefly embroidered. The patterns, done on counted threads, are invariably angular. The stitchery is extremely simple, comprising cross stitch and stroke stitch, both of which work up with amazing rapidity.

Assisi work is classic in style and workmanship. Cross stitch is the main stitch and is used for the grounding, leaving the design in fabric silhouette. To further bring out the pattern, outlines, and lines accenting it, are worked in the two-sided stroke stitch, or Holbein stitch, which is alike on both sides.

The reverse side of the cross stitch shows rows of parallel lines of short stitches exactly joining. This result is easy to accomplish if all the stitches of the first journey of one row are done in half-cross stitch (tent stitch) and then all the stitches forming the oblique crosses are done in a second journey in which the needle always is put into the identical stitch-holes of the first journey. This brings the threads crossing on top, and above one another on the wrong side. When several rows of the Assisi work are completed, the reverse side shows straight parallel lines.

The medium is never so coarse that the foundation is hidden completely even in worked portions. This is a distinct feature of Assisi work.

The two-sided stroke stitch — Holbein stitch — is also done in two journeys, so spaced that a broken line appears at first, each stitch being separated by its own length from those next it. In the second journey, by reversing

the order of stitches, all spaces are filled and the line is consecutive. The needle must be put into the identical holes made by it in the first line of work. Holbein stitch is named from the artist in whose pictures the embroidery is often delineated. It was a popular stitch in his time, being an outline stitch taken with the weave either horizontally or vertically, with angular turnings, embroidered as described. Often, at the termination of a line a slanted or a Y-shaped stitch is found. It lends additional decoration and is made in the same way as a straight one but diagonally across the weave.

All the stitchery in Assisi work is apt to be in one color, though the stroke stitch forming outlines and accents may be in black or some dark contrasting tone. Old blue, Italian red, black, and sage-green are favorite hues for the cross stitch grounding.

The foundation should be a straight weave foundation in which warp and weft cross at right angles with the precision of cross-stitch canvas. Aida canvas is excellent in a neutral shade of écru. In Italy, linen would be used. Therefore an extra-heavy, round-thread linen in natural color would be in perfect accord. Monks-cloth and even a high grade of burlap are both acceptable. The Aida canvas has the advantage of the stiffness of a cross stitch foundation, and also its holes.

Whatever the fabric, it should be good-looking, for it is exposed through the stitchery and the entire field is generally minus embroidery, the pattern consisting then of a deep border only.

When the stitchery is completed, line and interline the rug. Fell the lining down close to the turned-in edges of the rug, or bind the edges with a carpet binding in the same colors, or a wide, plain-toned linen tape. No fringe is needed; but if used, it should be short and of the same medium as the cross stitchery. A fringe of small tassels made of the embroidery medium is a consistent and attractive finish for rug ends.

Assisi rugs are recommended for their artistry as much as their simplicity of stitchery, and the rapidity with which they are made, all of which characteristics are appealing to the modern rug maker.

The Map Rug

Though there are map samplers, the map rug is unique. However, maps have been used for decorative purposes for centuries, and there is a distinct element of consistency in using them as floor coverings when treated simply. The most exquisite example of a map as a motif in textiles is instanced in the Kashmir shawl made for the Prince of Wales collection in India when, as Albert Edward, Prince of Wales, the late King Edward VII visited this remote portion of the British Empire in 1875–76. The map pictures Srinagar, the capital of Kashmir, on the banks of a river. Ships are on the blue water, flowers make gardens gay, trees spread their branches, houses are clearly seen, and persons walk about. The stitchery portrays, in colors, each minute detail as exquisitely as if the scenic

map were an ancient colored print. The parallel of this shawl to a rug is a genuine one, since the word *shawl* comes from the Sanskrit *sala,* signifying a floor, a room, and was so named because shawls were first used in the interchangeable capacity of carpets, hangings and coverlets.

There is something eminently appropriate about using a fabric map for a floor covering. Its position under foot is in keeping, and on it, as on the magic carpet of Persia, one can be transported in an instant over great spaces with but a single step.

It is important to work out cross stitch map rugs in the same quaint way that old map samplers were developed. Unlike the silhouette rug, outlines should be soft against backgrounds, and colors throughout should be subdued. However modern in geographical accuracy the rug may be, it should be " antiqued " in color.

XII

HOOKED RUGS

Part I

Origin and Development

Hooked rugs are folkcraft floor coverings of distinct individuality, conceded to be of American origin. They appeal to the rug maker because of their decorative value and their durability. They lure collectors by their quaintness, the historic period they represent in American floor coverings, the ingenuity of patterns developed in so commonplace a medium as rags, the charm of color to be found in choice antiques, mellowed by time, and the intriguing stitchery, the origin of which has baffled the research worker and has been variously attributed to many picturesque sources, more interesting than accurate, since nothing could be more consistent than its development from tambour stitch, later to be traced.

The grounds for believing hooked rugs of American invention, either from the section of the United States designated as New England, or from the more northern portion of North America known as Nova Scotia, are based upon investigation, which so far has revealed no records of the work that indicate antecedence in other parts of the globe.

It is true that in England, what is known as "String Work" (see Chapter XXI) was employed in rugcraft, certainly at the same time, and probably before hooked rugs were made in America; but this work, while similar in effect, as is the punch-loop rug work of to-day, is not identical in craftsmanship.

Though hooked rugs are of comparatively recent invention, the stitchery has its origin in the ancient East Indian tambour work, sometimes called Indian chain stitch. In this, as in hooked work, the foundation has to be held in a frame and the tool is a hook. The stitch as done in the Orient is one of minute fineness, taken in precisely the same way as in what we are pleased to call "hooked work," the sole exception being that in most cases the loops in rug work are not drawn through one another but left upstanding. There are instances, however, in which the rugs have a link fashioned pile. After each stitch, the medium is clipped, as in the Oriental knot pile carpet, thus releasing the looped ends which become erect from the tied knot. This type of clipped stitchery succeeded that of the loop stitch.

In most parts of the globe, tambour work has become an obsolete embroidery, though the stitch itself remains in modern chain stitch. It was in the zenith of its favor in America, however, being included in school curriculums, and specifically named under "extras," when hooked rugs were purported to have been originated, and the naturalness of its adaptation to its new purpose will be made apparent. By the slight variation mentioned,

the work took on a new terminology, sometimes being designated as "drawn in," "pulled," "pulled in," or "pegged," as well as "hooked" rug work, the last name surviving. Of recent years it has been employed for the making of trimmings, bags, cushions, etc., and has been shorn of the word "rug," establishing itself as a new craft, useful for many purposes under the category of hooked work.

The frame, the tool, and the method of procedure correspond with tambour work so perfectly in hooked work, that it is irrefutably tambour work, done in a coarse medium for rugs, requiring a greatly enlarged frame and a giant tambour needle or hook. There is no difference between a rug hook and a tambour hook, except in the size. The shank of each is fitted into a handle. The hook is pointed at the tip, which is not quite as deep as a crochet needle. The early makers of hooked rugs used to enlist the services of the village blacksmith to supply made-to-order rug hooks. He would file and re-fashion a huge handwrought nail into one and fit it into a handle, or bend the tip of a two-tined fork, after removing one tine. Rug makers have been known to put a knob of sealing-wax in lieu of a handle, onto a nail, so bent.

No better description of the method of doing hooked rug work could be given than the directions for tambour work. "The thread is held between the finger and thumb of the left hand, *beneath* the work. The hook is inserted with the right hand and drawn through a small loop. . . . The needle, in drawing up each loop, is slightly

twisted by a motion which has the effect of retaining the loop on the hook." ("Ladies' Manual of Fancywork," Mrs. Pullan.)

The foundation fabric, since it must be kept stretched, is fastened into a frame, whether the work be tambour or hooked stitchery. As both hands are employed at the same time in doing either work, the frame is as essential to one as to the other craft.

In hooked rug work, the pressure of the stitches, one against the other, is sufficient to make them hold fast, and produce a firm, uninterrupted surface of superimposed stitchery.

In studying the evolution of stitchery it will be found that the chain-stitch of tambour work is the nucleus of another craft, namely crocheting, as well as of the stitch of the first sewing-machine. We are indebted to the ingenuity of some clever woman, thoroughly acquainted with tambour embroidery, for the adaptation of the work to the making of rugs, substantial, strong and durable. It was she who skilfully transformed the ancient work into a new craft capable of using a coarse medium, and of constructing the loop pile, which was then (1755–1830) being introduced into loom carpets and featured in floor coverings of the better sort.

This solution to the mystery of the origin and development of the stitchery of hooked rugs is offered only after a long and close study of handicraft and handmade rugs from both Orient and Occident. But in the rugs alone, no explanation appeared. Light was gained only through the

assiduous study of stitchery as such, tracing its evolution from the crudest and earliest forms, and through later developments of craft and textile. Such research supplies convincing evidence of what hooked work is and how it became a novel and separate craft.

There is much controversy as to the time when the hooked rug made its initial appearance. The period of contention covers almost the entire eighteenth century and continues into the nineteenth. Some authorities put the date early in the eighteenth century, while others find little reason to believe that it was until the early years of the subsequent century. Proof for the first assumption would appear to be found in one rug apparently bearing the date of 1784. The question arises, however, whether the numerals are merely consecutive figures 1, 2, 3, 4, or constitute the date 1784. The rug field is surrounded by an alphabet border, in true sampler style. It was not unusual for samplers to furnish inspiration for such rugs. In sampler work progressive numerals were commonly employed to fill out a vacancy at the completion of an alphabet not perfectly spaced. This fact lends weight to the opinion that these figures are so used, as otherwise there would be a vacancy in the rug border. The two middle figures could as readily be 2, 3, as 7, 8, and the two end figures would be identical in either event.

Had the rug been developed in the precision of cross stitch, no controversy could have arisen. Owing to the lack of exactness in hooked stitchery there is opportunity for such doubts. One has only to compare the date in

old-time numeral formation 1784 with the figures 1234 to appreciate the similarity and to see how easy it would be for a rug maker to develop the figures in hooked stitchery so that one would scarcely be distinguishable from the other. No less an authority than Homer Eaton Keyes, known to be well versed in rug lore, as in all antiques, voices the consecutive numeral theory, upon close examination of the rug.

It must be admitted that the consensus of expert opinion is in favor of a much later date for the invention of the hooked rug than would be wished by enthusiasts over these floor coverings. Those who investigate, however, must be swayed by evidence and be convinced by proof.

George Francis Dow, Curator of the Society for the Preservation of New England Antiquities, summarizes his investigations, founded on an exhaustive study of inventories, in the following statement:

" Never yet have I found a scrap of evidence to show that a hooked or braided rug was made in New England before 1800. On the other hand, I have no definite evidence to the contrary, and they may have existed. But I do know this, that when I was a small boy even the country grocer had a stamped burlap the farmer's wife would buy and hook into patterns provided, and these are the rugs that are now sold as antiques. This I know absolutely, and when I say ' small boy ' that means 1870."

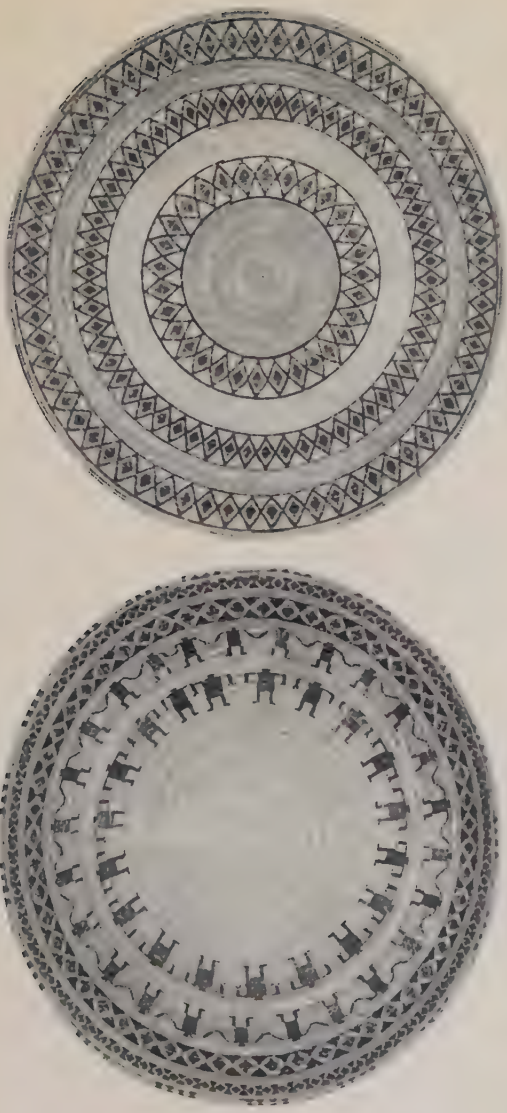
In another letter to me he further writes, " Such material *may* have been evolved and been in use before 1800," and also, " My opinion is that the considerable

vogue of the hooked rug was after 1825, and in this, I think all assembled evidence will back me up."

It would be difficult to learn from any one who has done more extensive research work in this matter. Therefore we may rest with the comfortable assurance that the early years of the nineteenth century are an approximate estimate of the correct date for the period when hooked rugs were established in American homes as noteworthy furnishings of sufficient merit and value to be tabulated in inventories and bequeathed to legatees.

Whatever the exact date may be for the evolution of hooked rugs and their initial appearance among American floor coverings, it is certain they are indisputably an American type of rug. There is something rather appealing in the quaint appellation " Early Colonial tapestries " of America. It conveys the pictorial element inherent in rare old tapestries and, at the same time, couples it with the idea of a sturdiness of texture and a quality of folk craftsmanship that is notably characteristic of hooked rugs. Yet there are barriers to its use, for hooked rugs are not truthfully " Early Colonial," and the medium of rags has no kinship with tapestry mediums, which often had precious metals inwoven with the wool yarn and silken strands.

There is, moreover, a type of fine loom embroidery known as American tapestry. It was developed largely under the direction of Mrs. Candace Wheeler, who was also at one time keenly interested in Colonial loom-woven rugs. Through her efforts a community enterprise in this



Courtesy, Am. Museum of Natural History

PLATE XV AMERIND MISSION BASKETS

The adaptability of basketry to rugcraft is instanced in these two choice examples.

PLATE XVI ANTIQUE HOOKED RUG

Design and texture set a stamp of excellence on this rug. (*Owned by Mr. George E. Wood, Brookline, Mass. Executed by Mrs. Oscar Wood.*)

rugcraft was undertaken and fostered for some time in the foothills of New York. But in this undertaking, as in all rug making enterprises, no permanency could be established. Rug making has ever prospered as a home-craft of individuality.

In connection with hooked rugs and their vogue, there are definite reasons why this kind of floor covering found favor in America. Foremost among them is the rigor of the climate in the sections where these floor coverings were evolved. The extra thickness of rugs supplied warmth that was welcome. It will be remembered that the origin of pile rugs in Central Asia is ascribed to this very source (see "Industrial Arts of India," Sir George Birdwood). In American Colonial houses, draughty and lacking in the comforts of central heating, the same reason prevailed. Hooked rugs provided comfortable protection against cold floors.

The period when the hooked rug came into prominence was after the time when floors were sanded to soften the tread, and incidentally to help polish the wide, planed boards. The designs traced on the sand no longer were needed to ornament the floors in most of the houses, for, during the last part of the eighteenth century, woven carpets were very generally used in the average home. These were sometimes of heavy homespun, sometimes of rag carpeting, and, in the homes of those accounted wealthy, carpets imported from Europe and England, and even from the Orient, adorned the rooms.

In one of the old Colonial records there is mention of

an importation of " 36 yards of Brousells carpett, with border — £36 " — approximately one hundred and eighty dollars. It will be seen by this that the judge whose wife so punctiliously made this entry in her account book must have been one of the " lords of the manor " in the newly settled continent.

We find an additional reason for the vogue of the hooked rug, in that it supplied a loop-pile floor covering, similar to that in Brussels carpet, many designs from which were copied in hooked rugs, making them somewhat akin to the type that had been engrossing the attention of loom carpet weavers during the eighteenth century. It was an achievement to construct a handcraft, loop-pile carpet. To be able to do this with the rapidity of hooked work, and at no cost, since the medium was rags, quite evidently proved a stimulus to rug makers in the home. The amazing number of genuine old hooked rugs, extant, is proof of their popularity. To this legitimate quantity, are added from time to time those artificially " antiqued " hooked rugs, against which the purchaser has to be on guard constantly.

Some aids invoking the mellowing process of years in the space of a short time are by no means reprehensible as a finishing process for the rugs one makes for home use, or for sale, provided no misrepresentation as to age is attempted. Rugs can be washed, faded by exposure to sun and rain, and dipped in a solution of weak tea or coffee, without thereby injuring the fabric. Nor is such treatment unjustified as a means of making colors har-

monize with those of a room where the rug is to be used, or to give them the esthetic quality much sought. It is only an unwarranted " trick of the trade " when such measures are in the nature of " doctoring " to fraudulently raise the price of a new rug to that of an antique. When it is discovered that a rug has been " treated," be it an Oriental or a hooked rug, a prospective purchaser is immediately wary. There are few persons acquainted with rugs who cannot detect a " doctored " rug and tell it from one toned by time. Deleterious processes are used frequently in such treatment, apart from the simple methods described. By a careful selection of colors for a new rug, the home rug maker can save herself extra trouble.

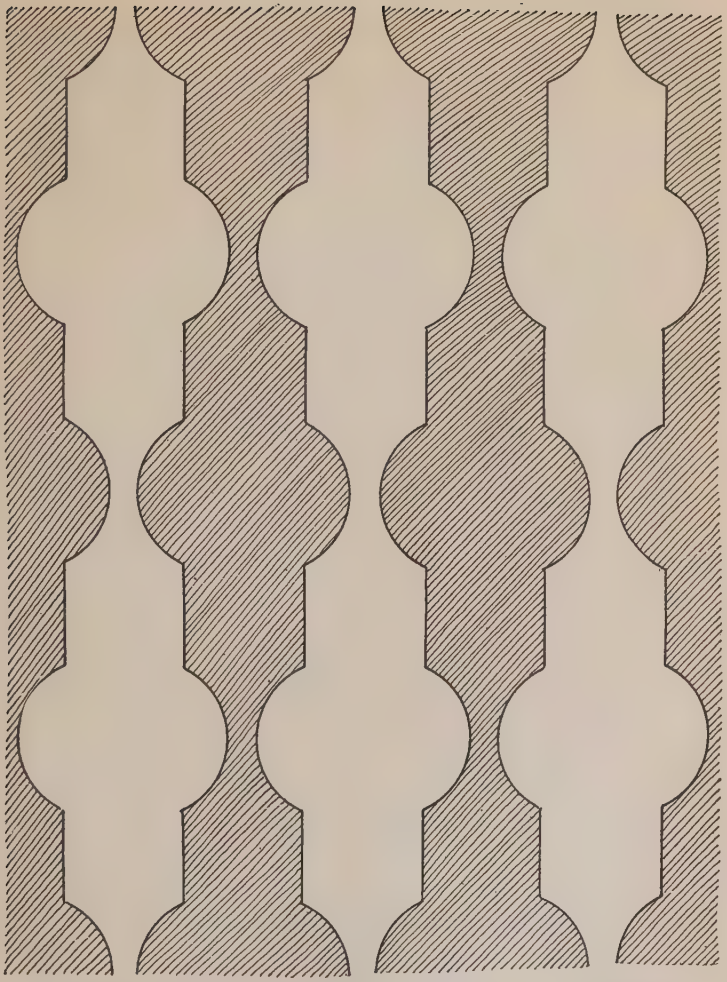
The charm of hooked rugs lies chiefly in their patterns brought out in the fabric strands, for in them can be traced the undaunted spirit of the American pioneer, determined to wrest decorative beauty as well as practical floor coverings from rags, the one plentiful medium. The rugs were not the first textile floor coverings for their homes, but they were the first folk art handicraft carpets in which design played an appreciable part. In them the rug makers had opportunity to display artistic creative ability and to show any latent faculty for free hand drawing and geometric designing. Inspiration was drawn from many sources and was active in adapting various motifs to the purpose.

It is easy to trace many of the patterns to their starting point. Patchwork quilt designs are not infrequently

found, and there can be little doubt but that it was from them that the simple, geometric rug patterns sprang. The rug makers had been long accustomed to copying and creating quilt patterns, and it was merely putting these same ideas to another use. Saucers, plates and bricks were the most usual objects to place on a foundation and arrange, after which a pencil or a bit of charred wood was drawn about them, and the design appeared. A slender stick of burning wood thrust into water often supplied the charcoal, which was then sharpened to a pencil point.

The straight weave of burlap or coarse homespun linen when used for rug foundations simplified the making of rectilinear designs, because, by following threads in the weave and marking them off across the length and width, squares and blocks could form patterns such as the Washington and Philadelphia Pavement, the Log Cabin, etc. Diagonal lines drawn from opposite corners of the foundation surface with lines, parallel to each, drawn at regular intervals over the foundation, made diamonds. Indeed many patterns were invented from nothing more than the geometric motifs variously combined.

Some of the rules were told me by an old Nova Scotia rug maker, when we were discussing the many hooked rugs on her floors. She considered the making of a hooked rug almost too simple to be worthy of comment, and something requiring "no time at all" to do. She explained that the methods given her for rug designing had been handed down from one generation to another from



HOOKED RUG DESIGN. FROM QUILT PATTERN IN GODEY'S "LADY'S BOOK."
Motif and background are alike in shape

" way back." The combination of colors she had used, and the outlining of the motifs with single lines of black, indicated what could be done to lend the artistic touch to simple patterns. A border of black outlined the rugs themselves.

A quaint " mosaic tile " or " Spanish tile " rug has squares of two different colors in a checker-board arrangement in the field with rectangles for a border. In each square is a sprig of berries in soft tones. Another rug, done in squares, has a grey jaspé effect in all. The hooking is done in alternate directions, horizontal and vertical and it is the very precise direction of the stitchery that supplies an interwoven decoration. Each square is outlined in dull blue and, in the centers little floral motifs are hooked in dull tones, as in the old time " penwiper " patchwork. The carpet-sized rug described was used for a number of years on the floor of the Women's City Club on Beacon Hill, Boston, in the room, once the huge kitchen of the mansion of early New England days, now used as a lounge. The open fireplace with its series of Dutch ovens and wall closets unchanged, is featured in this room so quaintly carpeted.

There is diversity of opinion as to whether the geometric hooked rug preceded or came after the floral. As no dated rug can supply evidence, conjecture fills in such a lapse. The facility with which geometric rugs can be designed is accepted as evident reason for their priority; but there are other determining factors. The temperament of the rug maker must be taken into consideration,

and her power of delineation. There were then no rug designs ready stamped. These came much later. So, when a rug was to be fashioned to fill some need, it depended upon her to create it. Her unhindered preference in design was the guide. Antique rugs indicate the freedom of choice. If she were a quilt maker, she would turn to designs typical of them. If she loved her flower garden, a floral pattern would result. Many times inspiration was found in the blossoms growing in profusion in some well-tended flower-bed, or in the gay roses that clambered over the trellised doorways. In some of the early rugs there is genuine sentiment, but no sentimentality. The latter was left for hooked rug enthusiasts of subsequent generations to instil.

Another source of inspiration for hooked rug patterns was found in Brussels carpets, with their simulated Oriental patterns, also in the French Aubusson, Savonnerie and Moquette floor coverings, with their pronounced designs of roses and floral sprays, scrolls and ribbons so delicately colored in pastel shades, with just a *soupçon* of black to give the French zest. Many of the quaint floral hooked rugs are as much indebted to such carpet patterns and to those on other exquisite textiles as to the flowers that grew in the garden. Many hooked rugs have caught the very atmosphere that pervades fabrics and rugs from France.

Oriental designs are not lacking in antique hooked rugs. The motifs quite evidently were taken from treasured "Turky Carpetts." These rugs give precedent for

similar designs in modern hooked rugs, and it is such patterns that fit into present schemes of decoration when the flaunting floral and peasant-like geometric designs are out of place. When hooked rugs are used without discrimination on floors of rooms totally at variance with their type, they express a wordless embarrassment in the incongruous setting. But hooked rugs in Oriental design and color, in fine craftsmanship, and with sheared loops of wool or yarn, are eminently suitable to the decoration of the day in which Oriental floor coverings are a pronounced feature. It is a mistake to overlook this variety of old-time hooked rug, for it is such rugs more than any others that are consistent with modern interiors.

Among such rugs of distinction are those in which a family coat-of-arms is used for a central medallion. These floor coverings, although their significance is even more definite, are comparable to the coat-of-arms carpets of the Orient, in which the insignia of a country was wrought into the textile. Instances of such a use of the coat-of-arms is seen in certain old Chinese, Persian, and Kazak rugs, and occasionally, though less frequently, in some Russian rugs, and in "Turky Carpetts" also. There are sporadic instances in more modern times of coat-of-arms rugs bearing family insignia. So there is authority for these hooked rugs which are intended especially for halls, libraries, and dens. One on which the seal of a college was wrought would be excellent in a student's room. They fit admirably into the decorative schemes of old manor houses of Colonial architecture. They are by no

means unsuited to surroundings that have an Old World trend, as in certain Spanish, Old English, Normandy, etc., interiors. The insignia immediately sets a stamp of dignity.

There is a tendency to ascribe pictorial rugs to a much later date than the geometric, floral, and Oriental patterned rugs. Without refuting this in any way, it may be stated that pictorial embroideries in Europe were distinguished by just such needlework pictures, and the Moravian embroideries of Bethlehem, Pennsylvania, also featured them during the era when hooked rugs were originated in America, making their use on folkcraft floor coverings to be expected.

In old hooked rugs there is a fascination about the very crudity of the drawing, using the curious medium of rag strands to develop the scenic effects. Such rags bespeak an era in American rugs that is not to be overlooked, for a genuine element of peasant art crept in. The pictures are realistic: frocks of girls and garb of men portray fashions in clothes; landscapes tell of countrysides as they were; houses are in the architecture of the period. Nothing is conventionalized as in Oriental pictorial rugs. They are real pictures, with the floor for a background instead of a wall.

Occasionally hooked picture rugs are made to-day, but now they are done in fine mediums and are intended for hangings rather than carpets. They are oddities, yet when done by an artist have merit of draughtsmanship, color and construction. Nevertheless, the pictorial hooked rug

has had its day, and revival of it is neither to be expected nor desired as a fashion, though there is a certain demand for reproductions of old types and smart period pictures.

In the middle of the nineteenth century animal rugs had a vogue. In these rugs the creatures have the most distorted anatomy, because of which amusing feature they have a certain appeal. It can be for no actual beauty that they are treasured, but rather for their historic period value and the amusement they afford. Since hooked rugs permit of free-hand drawing, which is held down by no restrictions of prescribed stitchery technique, the animals lack the formal treatment found in ancient embroideries and tapestries, governed by counted threads and limitations of weave. They lose in appeal accordingly. The fashion for these rugs has gone, and if ever it does return, it is sincerely to be hoped that draughtsmanship and textile designing will be brought into play. Of the antiques, it is often the crudest delineations that attract. They have the stamp of the genuine. The rug makers quite evidently strove to portray family pets to the best of their limited ability, and it is the weird attempts at realism that are arresting.

Marine rugs are a type of pictorial floor covering now enjoying a renaissance. Once intended for the cabins of masters of ships, to-day they are the delight also of those landlubbers who love the spread of sail, the arrogant poise of the prow, the waves and the sky, all of which lend themselves admirably to pictorial purposes. These rugs fit into seaside cottages, boys' and men's rooms in-

formally treated, lake, shore and riverside homes, as well as into rooms of old-fashioned Colonial decoration.

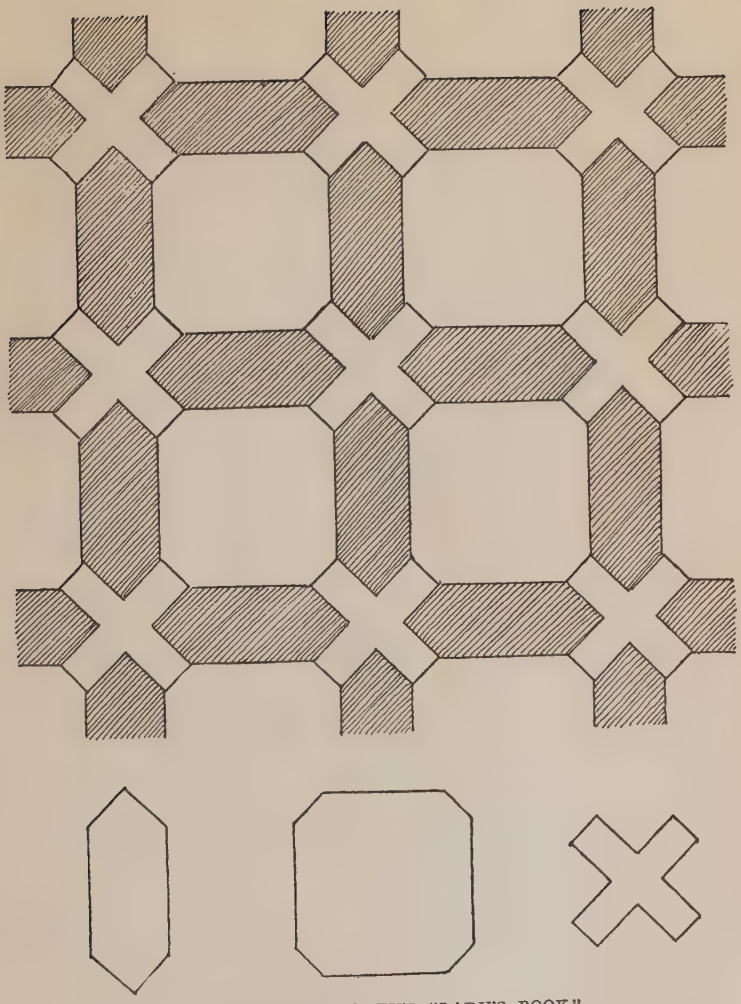
The scope of hooked design is too comprehensive for anything like a complete description in one chapter. There were sampler, map and motto rugs, good luck and welcome rugs, also rugs on which birds and feathered fowl disported themselves. And there were cut-out scroll rugs, in which the edges conformed to irregularities of the design, and also semi-circle, round, and elliptical doormats. It is quite possible that old millstones are responsible for the shape of the semicircular mat. It was made in two parts of like contour. Such stones are prized to-day for doorsteps to farmhouses and summer homes in the country. The old rugs were not devoid of eccentricities of technique. The embossed rug, in which motifs were in low relief against a background, found favor. These were similar to the carved Chinese rugs in the workmanship of which those Orientals excel. The reserve evidenced there was not, and is not, maintained in the hooked rug. Some of the latter have the patterns so raised from the background as to make them unfit for floor coverings. An even surface has ever been more satisfactory, for on such rugs furniture is not wobbly, and there is not the danger of a stumbling or unsteady tread.

It is impossible, however, not to admire some of these embossed rugs when developed with the masterly skill of a competent and artistic craftsman, just as it is impossible not to deplore the bungling attempts of the inartistic. In the fine embossed floral rugs the sense of

proportion is acutely displayed, the shearing being so deftly done that designs appear to be higher than they really are. Attention is caught by the simplicity of detail, accented just enough by the slight added height to create an atmosphere of charm and suggest the beauty found in some quaint old-fashioned garden.

In tracing the various stages of design and the influences brought to bear on them in hooked rugcraft, the place occupied by Godey's "Lady's Book" is unique. Without ever mentioning hooked rugs, so far as a careful search has revealed, this magazine still had a decided influence on rug patterns. It did bring out designs and patterns of the time, and it is a bit puzzling to understand just why hooked rugs were neglected since the magazine made its initial appearance in 1829, an era when hooked rugs were flourishing. There seems to be an implication that these rugs were too much a folk art, and not sufficiently "elegant" to be noticed in so exclusive and fastidious a publication. Nevertheless, by consulting the files and comparing patterns presented therein with hooked rug patterns, both in geometric figures and figures of personal fashion, the part the magazine played in trends of rug design is immediately perceived.

Identical designs were frequently wrested from other intended purposes and put to excellent use by the homecraft rug maker. Two such patterns are presented here from the "Lady's Book," being especially well suited to modern hooked rugcraft. The motifs used in combination are shown by the side of one pattern. These should



PATTERN FROM GODEY'S "LADY'S BOOK"

As appropriate for a carpet as for a quilt

be cut from folded paper in the sizes desired. An entire set should be cut and assembled to insure perfect fitting together of the motifs. Then one or more sets should be cut from cardboard, and arranged on the rug foundation. Each motif should be drawn about, to leave its outline imprinted in the correct place. Cover the field of the rug with the geometric figures and inclose with a plain band for an outer border. By hooking the outlines in black and filling in the spaces with color in esthetic harmony, the effect in some instances will suggest the rich beauty of tessellation found in stained-glass windows. Another method of transferring these patterns to rug foundations is to cut a stencil pattern of one quarter of the rug and stencil this in four repeats, allowing for the plain border or including it in the stencil pattern.

When the rug is for a bathroom or chamber, cotton is a good medium, as cotton rugs wash well. Loops should not be sheared, for cotton does not "felt," and also because the sheared cotton pile does not withstand laundering as well as the looped. The designs *per se,* however, lend themselves as admirably to woolen rugs as cotton. In wool rugs the pile would be apt to be sheared.

It is a question whether any hooked rug originally had the pile cut. It may be that, after use, the rug colors lost their freshness, and to restore them to their pristine clearness the rug maker resorted to snipping off the tops of the loops. This would bring a new strata of the textile to the light. There are two outstanding reasons for the soundness of the theory of the uncut preceding the cut

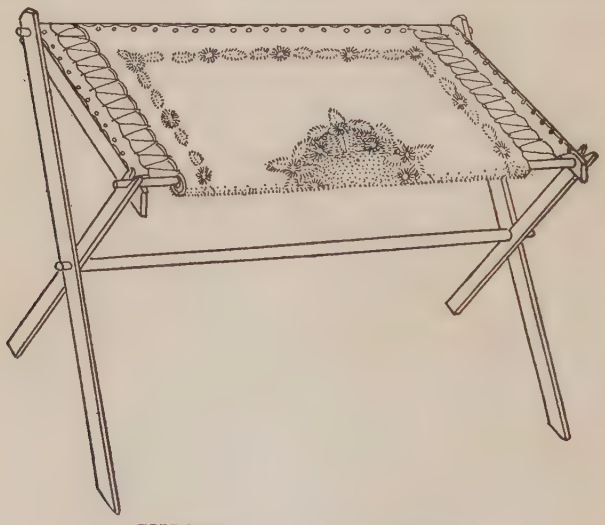
pile. The stitchery from which the hooked work evolved was of loop formation, and the loop pile was in vogue at the time when hooked rugs sprang into existence, and part of the object of such rugs was to create the impression of loom-woven floor coverings. On the other hand, the fact that those who wanted to simulate "Turky Carpetts" would shear the loops cannot be disregarded. The knot carpet had been made in Europe as well as in Asia, and this invariably has the cut pile.

In power-loom carpets it was possible to get a splendid surface of uncut pile. It had the appeal of novelty as well as suitability and became a vogue partly for this reason, also partly because of the exigencies of carpet machinery. It must be remembered that machine-made floor coverings were the things to have at that time. Their popularity so threatened handmade carpets that it was thought they would be driven out of existence. But time can be relied upon to prove the stability of a product, and so to-day the handmade rugs, whether made in the Orient or Occident are more in demand than before. The tables are reversed. To-day it is the pride of carpet manufacturers to make perfect reproductions of handmade carpets, rather than of rug makers to attempt machine effects in handicraft rugs.

Part II

Equipment and Construction

The equipment for hooked rugcraft consists of a rug frame, a rug hook, a patterned foundation, and working medium. To this it is advisable to add a pair of shears with curved tips, or with blades on a lower level than the



COLLAPSIBLE STANDARD FRAME

handles, which are bent at angles to give the desired shape. These types are used by Oriental rug makers. Those with curved tips are also known as surgical shears. Prices of these types of scissors are not more than those of regulation shears of like grade.

Of the several kinds of rug frames, the most convenient are those with collapsible standards, for they do away with the necessity of fixing chair backs or saw horses for frame rests. The collapsible standard frames belong to the type of furniture called " tuckaway," which can be folded flat and put behind doors or in closets, without occupying any appreciable space. Prices for these frames vary according to models and grades of materials used in construction. As they can be had as low as frames minus standards, the price is no barrier.

A simple frame that anyone can make consists of four strips of seven-eighths or one inch boards, two inches wide. Two of the strips should be forty or fifty inches long. These are called " carriers," because they come at top and bottom of the frame and hold or " carry " the rug, which, if too long to be entirely exposed, is wound about one or the other, as the rug maker prefers, while the part exposed is worked. Afterward the rug is readjusted by rolling the worked part about the other carrier and positioning an unworked portion. The two shorter strips are called " stretchers." They are eighteen or twenty inches long and are side pieces, holding the frame extended. Four large metal clamps, obtainable at any hardware store for a few cents each, are needed to fasten corners of the frame securely at right angles.

There are finer frames with mortised carriers, through which are run spreaders, having, at each end, six or more auger holes bored at distances of one-half to one inch apart. Pegs, fitted into corresponding holes in the spread-

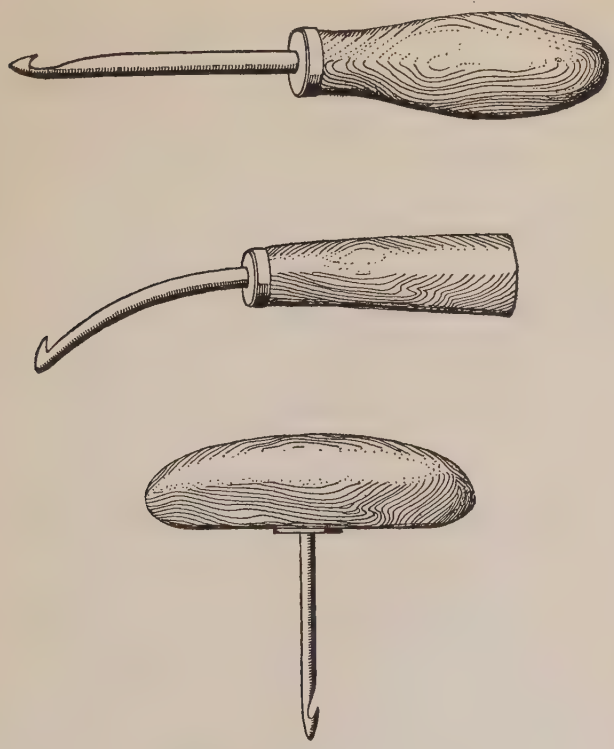
ers after the frame is put together, hold strips at perfect right angles.

Another model of frame has a stationary peg one or one and one-half inches from each end of the spreaders. Auger holes in carriers are fitted over the pegs when the frame is set up and a shutter or latch holds them firmly in place. Both of these rug frames are excellent and can also be made at home, though not quite as easily as the first. To insure straight rugs, it is imperative that corners be at absolute right angles when frames are " squared."

Three types of rug hooks are in common use, and a fourth, which is a mechanical substitute called a " punch hook," although in reality a needle. A rug maker should choose the kind best suited to her hand and method of work. The metal should be well tempered, and the wooden handles smooth. One model is straight, another has an angular shank, while the shank of a third is curved. Besides the regulation shapes of handles, one comes broad, curved and flattened at the top like a door-knob. The straight shank is short. When in use, the handle is grasped with the right hand in such a way that the top fits into the palm of the hand.

The straight hook is held with the thumb and fingers of the right hand. Both this and the hook just described are held vertically over a rug when the hook is pushed through the foundation, but by a twist of the wrist are turned at an angle, when a loop is drawn through the fabric.

The handle of the bent hook is encircled with the



THREE TYPES OF RUG HOOK

thumb and fingers of the right hand, held palm down, and almost parallel with the foundation, during the hooking. The hook is pushed through the foundation by turning the hand toward the thumb, and is raised, after the loop has been caught, by turning the hand from the wrist back toward the little finger.

The shapes of hooks themselves vary. The usual one has a rather shallow *croche* and quite pointed tip. It comes in two or more sizes for coarse and fine mediums. A rug crochet hook is precisely like a regulation crochet hook made of steel. The shank is fitted into a wooden handle. It is made to supply a demand of rug makers who prefer a crochet needle to a rug hook for the craft. For some mediums, the number ten aluminum, or metal composition, crochet hook is admirably suited to hooked rugcraft. Such a hook does not pierce the strands of a foundation textile, nor separate filaments of mediums, however lightly twisted, such as rope jute, roving, etc.

The immense popularity of hooked rugs is responsible for the invention of a mechanical device for producing the looped pile. The "punch hook" is the name of the tool, but it is a misnomer to call it a hook, as it has none, a variety of needle taking its place. Rugs made with the punch needle, however good they may be, are therefore mechanical replicas, not genuine hooked rugs, though they have the same loop structure.

The punch needle comes in many forms, but in each the principle is the same — the automatic, mechanical feeding of the medium through the threaded tool into the fabric. Primarily this was all that the needle did, but almost immediately a gage was added whereby, with no other care on the part of the rug maker than the initial one of fastening the stitch regulator to suit the height of the loop determined upon, the stitches would be auto-

matically of the same size and the pile unvariable. As will be seen, the sole remaining handicraft element left for the rug maker to instil into her work is the spacing and direction of the stitchery. The work lacks the individuality of genuine handicraft products; those slight idiosyncrasies and discrepancies that are the proof and charm of handmade articles.

The technique of the punch needle differs from that of the rug hook in that, with the former, work is done on the wrong side and with the latter on the right. The pattern to be done is uppermost, but the tool pushes the loops through and they remain on the under side which becomes the right side. The value of the punch needle lies in the rapidity with which the work can be accomplished. This is a point that cannot be overlooked in modern times, when speed is a force and effect an object. Cost does not enter into the consideration, as the punch loop rug costs as much as the others to make.

The punch needle has its excellent uses, however, in reproducing rugs where the mechanical precision of stitchery is an asset. It is well employed, therefore, in the making of floor coverings simulating cut pile loom carpets, such as Moquette. These can be fashioned in rug sizes with both pile and pattern closely resembling the genuine, when yarn is the medium. Distinctly modern rugs, suited to up-to-date interiors, are easily possible to make.

The foundation of any hooked rug is of prime importance, since the life of the rug is dependent upon the

durability of this fabric. A heavy homespun linen is best, and is found in many antiques. To-day it is considered too costly. A rather coarse, not too closely woven, machine-made linen is a good second choice, but burlap is the most usual and has been from the first. It has the necessary straight weave, while the loose texture permits the crowding of stitches without straining the textile nor tiring the hand when hooking through it. The regularity of the weave facilitates laying of patterns.

Suitable mediums are numerous, such as rags, rug yarn, and ordinary yarn in two or more strands, roving, jute, (rope or three-ply), candle wicking, chenille, carpet raveling, raveled out knit or crocheted woolen garments, sweaters, scarfs, etc., stockings, jersey cloth, etc. The chief one is fabric, and bears the commonplace and inadequate name of rags; but if these are thought of as worn fragments of old clothes, we must revise our conception of what rug rags are, lest threadbare pieces of material be used in which the wearing quality is gone. Rugs made from such textiles have little or no durability.

In the lore of rugs, the word rags means either new stock or the strong and good parts of garments discarded because they no longer fulfill their purpose as wearing apparel. The reason for so considering them may be that the garments are out of style, faded, worn in some places only while strong in others, or it may be that the wearer has tired of them after their serving well for a sufficiently long time. Or the goods may be in faded or spotted pieces, not fit for other use than in rug strands. These

blemishes are no barrier to rug making, for faded goods appear mellowed, and spots give a stippled effect.

Remnants of cloth already on hand, new cloth bought expressly for the rugcraft, and selvages procured by the pound from mills are to-day frequently used. Indeed there is a growing tendency to buy mediums. Correct amounts can be obtained in just the right colors without having to resort to the dye pot, and strips can be rapidly torn in lengths suitable for the work. In olden times, when rug makers spun the yarn for weaving, and home dyeing was a necessity, the first use of the textiles was for far different articles than floor coverings made of torn strips of cloth. To put new cloth into rugs was an unindulged extravagance, and hooked rugs were distinctly thrifty floor coverings. But it cannot be denied that home makers realized that carpets, as well as clothes, were essential to comfort, and many garments would have proved wearable longer if the women did not have an eye to their excellence in rugs.

To-day hooked rugs are thriftily made of discarded garments or made of new cloth economically bought, or of mediums other than textiles, but they come under the category of rag rugs. There is a quaint charm about the term that suits the craft of the early American colonists, and it is this that one is loath to forfeit even in idea, although mediums sometimes are as fine as specially made all-wool rug yarns.

The present vogue for hooked rugs has brought out so many stamped burlap patterns, that there is a tendency

to use them rather than to create individual designs. It was so in the vogue of 1870, which accounts for crudity in many antiques of that era. This tendency is unfortunate, as it robs the floor coverings of distinction and the rug maker of an essential interest in her work — that of creating beauty. The first hooked rug makers designed as well as executed.

Apart from the patterns which are drawn free-hand, or made by copying or tracing about such commonplace objects as compasses, bricks, plates, baskets, flowers, etc., other patterns can be adapted, and designs created from simple motifs. This is so easy to do that any one with any artistic ability whatsoever can have success by following directions that are given.

Oriental motifs can be traced from rugs or first taken off by counted stitches on draughting paper ruled in squares, as for cross stitch. These motifs can be cut from cardboard and arranged on a rug field. A few motifs scattered over a field and surrounded by one or more borders, all done in Oriental colors, will make an attractive rug. Caucasian and Chinese rugs are particularly good types to simulate, as their motifs are bold and easy to copy. Large diamonds can be arranged on a field (see mosaic rug diagrams) and a few Oriental motifs can be inclosed in each, with the field outside left in plain color. For borders, use two or more simple border motifs hooked in different colors on a plain background and edge each border with a line of contrasting color. Excellent results will be gained — always providing color schemes are

Oriental. These rugs are stressed because of their adaptability to modern schemes of interior decoration.

Patterns can be squared off, enlarged, and copied from book covers, rug designs, pictures, etc., as a copying artist squares off a painting. The rug foundation is divided by horizontal and vertical lines into square sections, each one corresponding to a like division that may or may not be visibly measured on the surface being copied. If the original cannot be marked off, cover it with tracing paper and square that. In each section of the rug foundation, draw the outline that occupies the same section in the picture. This is one of the simplest methods of copying, whereby enlarging can be done accurately and simultaneously with the first drawing. It has only to be tried to prove its efficacy.

Folded patterns or motifs can be used to-day as acceptably as by old-time hooked rug designers. This method is one of the oldest known to rugcraft (see Chapter XVII, " Old Patchwork for New Rugs "). After opening out the motifs, cut duplicates from cardboard and arrange them on the foundation fabric. Trace around them with a soft pencil, a crayon, or a paint-brush dipped in India ink, liquid bluing, or any stain. Arrange in design form, and enclose the field with one or more borders. One quarter of a pattern can be designed and a stencil cut from it where duplication of sections is desirable. This method can be employed when designing rugs in some of the other crafts.

A little experimenting in draughting one's own patterns

will give the needed skill. Certainly if, in olden times, rug makers were venturesome enough to create their own patterns, modern rug makers should not be more timid. If the result is not satisfactory in the first instance, reverse the foundation fabric and make a new design. An added interest centers in rugcraft when both design and workmanship are by the rug maker.

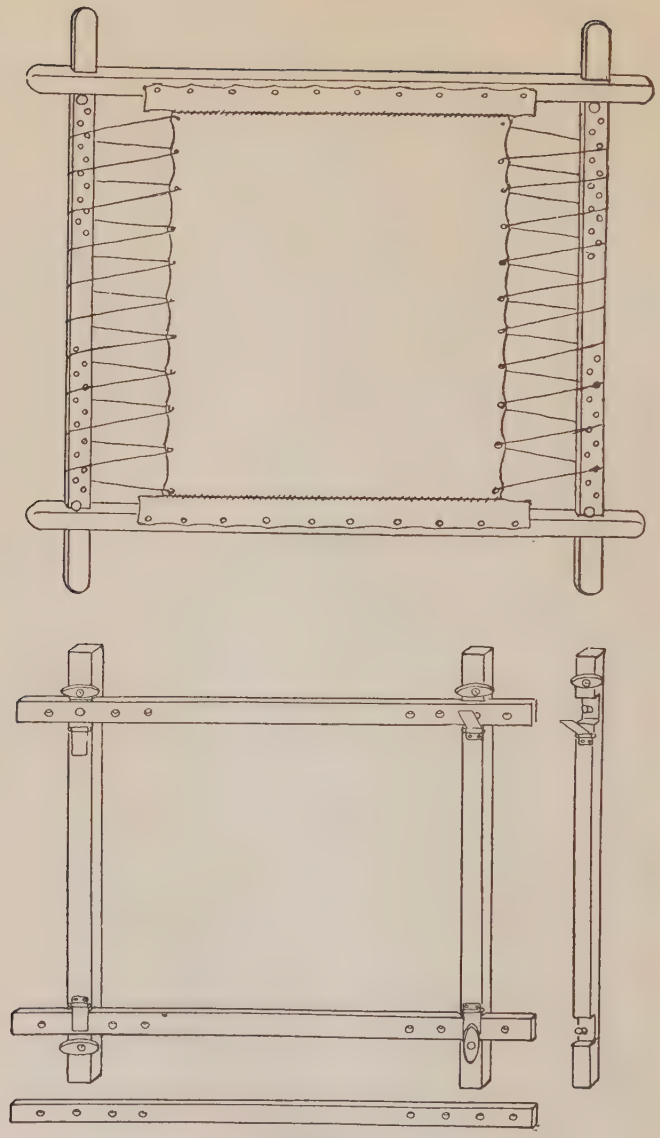
When the rug pattern has been developed and outlined on the foundation, it must be fastened into the rug frame before the process of hooking can be begun. There are three methods of securing a foundation to a frame. Each is given in detail for the rug maker's choice. It can be tacked in, sewed in, or lashed in, after being bound, hemmed or overcast. The pattern may completely cover the foundation or occupy but a portion of it only, as in oval, semicircular, round, half oval rugs, or those with irregular edges, as instanced in some scroll patterns.

A frame requires no special preparation when the foundation is to be tacked to it. Use substantial thumbtacks, or short tacks with flat, rather large heads, easily removed with a tack lifter, and do not put them in close together. The foundation textile, turned in along the edge for extra strength, must extend beyond the pattern far enough for the hooking to be done to the line of the rug. It is impossible to take the stitches through the fabric on a line touching the frame.

When a foundation is to be sewed to a frame, it is necessary to nail the edges of a fold of ticking or one edge of carpet binding to each carrier strip. The binding must

extend over the inner edge of the frame. If the foundation is not hemmed or bound *along the line of the rug,* but has some goods extending beyond it, the foundation may overlap the strips and be held to them with running stitches. The pattern on the foundation must not be so close to the textile on the frame that the latter would interfere with the hooked stitchery. If the rug is hemmed or otherwise finished *on a line with the pattern,* then it must be sewed to the binding on the frame with stitches long enough to allow some space between the binding and the rug foundation. A fagoting stitch is used. In this way the hooking is kept free from the textile nailed to the frame.

If a foundation is lashed to a frame, each strip of wood is wound with carpet binding or strips of stout cloth that does not fray. The binding must not interfere with auger holes or pegs. The foundation when lashed in does not touch the frame, but is kept sufficiently far from it by the long fagoting stitches to permit hooking to be done along the very edge of the foundation. Therefore, rugs so fastened to a frame are generally finished *along the edge* of the rug. Stitches are taken first at rug corners, securing them in position. Then from one corner, with a large needle, threaded with very coarse cotton or carpet thread, doubled, the foundation is caught with a short stitch. The thread is then run in a slightly diagonal direction over the frame and through the foundation. This process is continued from corner to corner. The taut thread presses against the wound frame and stitches are held securely.



RUG FRAMES

At top, frame with mortised carriers. At bottom, frame with peg and shutter fastenings

A favored method of fastening rugs to frames is to secure the top and bottom of the foundation, however finished, to the carriers. Then the stretchers are put in position and fastened at exact right angles. If the rug is longer than the stretchers, the foundation is rolled about the top or bottom carrier until it is short enough to be stretched smooth and even when the stretchers are in position. When the exposed part of the rug is hooked, the frame may be taken apart, and the foundation already worked wound about the opposite stretcher until another section of unworked foundation is exposed for hooking. Then the frame is again set up. Frequently a rug is removed and its position shifted without taking the frame apart. Craftsmen who make a business of selling the rugs they make frequently have extra large frames in which rugs of carpet size (six by nine feet) can be stretched full length.

The pattern must always be uppermost when a foundation is in a frame. Always fasten corners of rugs to frames before sewing the edges. To center a foundation perfectly, double it and position the middle spot of the edge to the middle spot on the frame. When secured, draw the foundation edges from the central fastening to each corner and position them. Then fasten the foundation between points.

A method that has been found satisfactory by the writer is to turn rug edges along the pattern line, over the right side of the foundation and stitch flat, either by running stitches, or machine. The foundation should first be cut

an inch wider than the pattern and the edges overcast. Cut away the textile that overlaps at corners and overcast the diagonal lines to form a trim mitre. When a rug is hooked, the edges are neat. A foundation so finished can be fastened to a frame in any of the ways given, where an extra foundation edge is not needed.

When the rug foundation, pattern uppermost, has been centered and set up in a frame which has been adjusted to an easy height for the rug maker, the operation of hooking in the medium conveniently at hand, should start. The position of the hand differs according to the type of hook used (see page 215). It is well to place on one corner of the foundation some lengths of medium in colors that will soon be needed to carry out the design. These should be constantly replenished as the hooking proceeds.

The medium itself may be narrow or wide. The size of it is more responsible than anything else in determining whether loops shall be long or short, and stitches coarse or fine. In preparing rags it is well to have an approximate gage for widths of them and to know how best to insure even sizes. A firm woolen textile, such as ordinary-weight flannel, can be cut as narrow as one-quarter inch, and this is the weight of cloth best suited to hooking. All textiles used together must approximate the same sized strand, even though thinner cloth may have to be two or three times as wide. Whenever possible, strips should be cut or torn *lengthwise* of the material, and it is best to have them not more than one and one-

half yards long. Few woolen textiles, less than one-quarter inch wide can stand the strain of hooking. They are likely to pull apart and separate.

When cotton goods the weight of chambray is the medium, the width of strips advised is one-half inch. As cotton folds and creases under pressure and has not the resilience of woolen textiles, the effect of the two widths in the different materials is approximately the same in finished rugs. It must be remembered that there is no hard and fast rule for widths. The discretion of the rug maker must be used. And she may decide to use either finer or coarser strands than mentioned if she makes a rug of very fine or very coarse stitchery. In some instances different widths are used in one rug, a fine short cotton loop sometimes but three-sixteenths inch high forming the background for a design in coarser cut woolen pile.

Hold the medium to be hooked in the left hand between the thumb and forefinger and close to the foundation beneath the place where the stitchery is to be done. The hook is held in the right hand over the stitch spot. The tip is pressed through the foundation and the medium is caught by the hook, which is then pulled up, bringing with it the end of the medium. The first and last stitch of any medium is always a tip of the strand. A stitch must never end on the wrong side of a rug. Each stitch, except those in which a color is begun or ended, consists of a small loop drawn through the foundation. The loop three-eighths inch high is approved, but one-quarter inch loops are frequently found. Even shorter

loops are used at times when strips are very narrow. Embossed patterns have the loops even higher, to allow for rounded shearing effects.

A little knack that the writer has found helpful is to press the hook against the foundation when drawing it up with the loop, so that the opening is slightly enlarged, permitting the curved part of the hook to come through without a hitch. The stitch is taken precisely as for tambour work, even to the twist of the wrist.

Only a few threads of foundation should be allowed between stitches, as it is the pressure of one stitch against another that alone is responsible for the firmness of the superimposed surface of pile. A coarse medium occupies more space than a fine one and necessitates stitches being set farther apart. Also, the coarser medium naturally calls for a higher loop. An uncut pile is shorter than a cut. For the latter, a little extra depth should be given to allow for shearing.

Hooking should progress in a general way from right to left, and from edges toward the center. Designs are outlined, however, before being filled in, and it is often wise to fill in motifs and then do the background around them. Even so, a general direction toward the left and also toward the center can be followed. By working from the edge to the center, any puckering of the goods that might otherwise occur along the edges is averted. It is the practise of the writer to make one border, or at least three rows of hooking, around the edge of each exposed rug surface before filling in any of the field.

Rug makers, however, are privileged to suit their own preference in the method of hooking. For instance, some rug makers work half the exposed surface in a frame and then turn the frame and do the other half. Some work in rows, some with stitches purposely set at differing angles; some try to have all loops of exactly the same height, and some deliberately vary them.

The direction of the stitchery can supply interesting variety to hooked rug surfaces, while differing heights of loops in sheared rugs allow occasional shorter loops to remain uncut. This is thought to supply extra strength. Loops should certainly be uneven and many left uncut in a cotton rug that is sheared, as cotton does not felt, but merely frays. A frayed pile is not especially durable, while a felted pile is. The wise rug maker shears woolen pile, and leaves cotton and jute in loops. The uncut loop pile is also capable of great diversity of effect. Loops may be very short and close, making a fine compact surface, or long and close, making a rug of deep pile. They may be short and of wide span, giving a flat effect, quickly achieved, or both length and span can be increased for even coarser results.

To make a knot-tied hooked rug pile, follow the instructions for tambour work, making the spaces between the first and second stitches very short. After drawing the first loop through the foundation, do not let it slip off the shank of the hook, but keep it on the needle. When drawing the second loop through, also catch the short end of the strand left hanging when the first stitch was

taken. Draw both through the loop on the shank. Clip the ends and pull to make a tight knot. It will be seen that it takes two operations to complete one stitch. Repeat throughout the rug surface. Although this is a simple stitch, it takes far more time to fashion than the plain loop, without giving greater beauty or more durability. It is not surprising, therefore, that the knot-tied pile was seldom used in hooked rugcraft.

Whatever the kind of hooked rug chosen for making, a hint to the amateur craftsman will prove helpful. Avoid too great precision of stitchery. It is not to be found in antique hooked rugs, and these are the correct models to follow. A little incident may give enlightenment in this connection.

A coterie of women was engaged to make hooked rugs. It would have proved a lucrative occupation if rightly pursued. Everything of the best was put into their hands — fine wools, excellent designs, and correct patterns. Yet their work was a failure. This was because the women refused to grasp the fact that they were making folkcraft rugs and not reproductions of machine-made floor coverings. The precision of their work, with its parallel lines of straight stitchery, had no charm nor appeal. It was not true to type, and the enterprise had to be abandoned.

A community enterprise which did enjoy an artistic success was that of the Sabatos Rug, under the direction of Mrs. Douglas Volk. The name was taken from Mt. Sabatos, Maine, where the work was done. Mrs. Volk developed a method of knot-tied pile that brought her

into prominence in the forwarding of this community work in rugcraft. The name " Sabatos Rugs," therefore, stands for a specific type of hooked rug of rare excellence, with foundations handwoven and wool specially grown for the yarn.

Another venture worthy of mention was promoted by Helen Albee, in what were known as the Abnákee rugs. In them Mrs. Albee sought to raise the standard of hooked rag rugs, rather than to forward any different kind of stitchery in her community enterprise. Her group was established at Pequaket, New Hampshire, where the Pequaket tribe of the Abnaqui Indians had been wont to roam. The name Abnaqui appealed to Mrs. Albee, who modernized the spelling and adopted it for her rug work. Wool rags and burlap foundations were the basis of the craft in which handsome hooked rugs of both loop and sheared pile were fashioned.

The shearing of a rug, of whatever sort, is a task for an expert. An evenly cut pile can be had only by very careful manipulation of the scissors. The final cutting of the pile of an Oriental rug is considered so particular an operation that a mechanical device has been invented, and is frequently used on modern Eastern carpets. This is mentioned to emphasize the fact that the shearing of hooked rugs requires great deftness.

Part of the knack of shearing hooked loops is to run the finger under the rug where the pile is being cut, elevating it a trifle. Only the tip of the loop must be snipped off, thus separating the loop into two strands.

The scissors with angular handles, or those with the curved blades (surgical scissors) are recommended. They are used by Oriental rug makers. The blades in the first type skim the surface evenly as the shears are manipulated, while the hand working them rests on the rug. This is possible, as the handles are on a higher level than the blades. The pile should not be raised, as suggested, when these scissors are used. The danger of gouging the pile of a rug is eliminated when these or curved shears are employed, for the tips do not enter the pile. Shearing rugs with ordinary scissors is precarious work, and should be left to experienced rug makers, should they choose to use such shears.

Fancy shearing is expert work, for the background has to be on a lower level than the motifs, and therefore clipped closer. The motifs should have been hooked in higher loops. The pile is often graduated from the background level to surprising heights in the middle of a design. This high relief work is bizarre and done to impress the uninitiate with the skill of the rug maker more than for any other reason.

Fancy shearing is not an idea peculiar to hooked rug makers. It is one of the Chinese methods, also to be found in a very limited number of Anatolian rugs. It was abandoned in the latter rugs, and is done in a very reserved way, only, by the Chinese. If the Oriental rug makers discard this fancy "carved" or embossed clipped pile, hooked rug makers can do no better than to follow their example, for they are the finest creators of handmade

rugs the world has ever produced. It is the pile of the Oriental rug that all other pile rugs are fashioned after. When yarn is used for hooked rugs, the pile can reflect some of the same beauty. When rags are the medium, the rugs have their own distinct individuality, quaint and interesting.

While it is customary to have rug edges hemmed or bound, occasionally rugs are lined. Denim and ticking make stout linings. Carpet-size hooked rugs are made in breadths and seamed together like pile carpets. Hold the widths together with right sides facing each other. Overhand the seams, taking but a few threads up in each stitch. When a few stitches, or a short needleful, has been done in one direction, reverse the order of stitches to give a crossed stitch. The seam must be so narrow that it will flatten out when breadths are opened. Carpet breadths are sewed by counted threads, thus insuring perfect joining of design motifs, and the sewing of hooked carpets should follow this same method.

When a rug edge is finished, after being taken from a frame, the foundation, cut one inch wider than the rug, is turned back and hemmed. Or the foundation may be cut a little narrower before turning, and a binding tape be sewed flat over it. Rugs with curved, or irregular edges frequently need to have little V-shaped pieces snipped from the turned-in edges to make them lie absolutely flat. When this is the case, the rug must be finished off with a flat binding, sewed carefully over the turned-in edge.

The hooked rug maker who creates her own designs and works them deftly in well chosen colors, can have as fine examples of work as did the old rug makers. These new rugs, also, may be accounted worthy of being inventoried and bequeathed to future generations.

XIII

FABRIC MOSAIC RUGS

Commonly Called Button, Spool, or Dollar Rugs

The spool, button, or dollar rug is, of structural necessity, a mosaic floor covering, the segments of which are fabric instead of marble, stone, glass, etc. Each bit of material is carefully fitted with the others, and firmly set with stitches. In rugs that have any pretense to beauty, the arrangement of the motifs according to color gives rise to a pattern. In the old Colonial rugs this invariably assumed geometric proportions, diamonds of large or small size being most in favor. While there is a quaint charm about these rugs, the idea that thrift was the inspiration is ever present. One can scarcely disregard the evident skilful use of scraps of available material. Yet one's heart rather warms toward the woman who, in order to add warmth to draughty floors and decoration to barren boards, contrived to fashion, from what she had, something to fill her needs. The button rugs certainly are ingenious and often have an appeal because of the colors in kaleidoscopic harmony. There must also be precision of design.

The names by which the rug is familiarly known — button, dollar, and spool — are nothing if not prosaic. Yet they are not minus individuality; and one, the dollar rug, has a note of historic interest. It was so named be-

cause the silver dollar was employed as a pattern mold, instead of a disk of metal cut the right size. The "cart-wheel" dollars, then made of silver, are now out of coinage, being too cumbersome to be practical, as their nickname implies. But they made excellent rug pattern molds! One is a little at a loss to comprehend why the rugs were not called coin rugs, since those making them took two or three kinds of coin for pattern molds, according to whether there were two or three discs centered one above the other. Perhaps more affluence was expressed by the word "dollar" than by "coin," which might have been interpreted to mean mere "cent." The names "button" and "spool" were acquired through the use of each as a pattern mold, and three different sizes were usually employed.

There is found in all of these names a curious tendency to subordinate the structural character of the rug and to emphasize, not the pattern, but the object used for the pattern motif. The fact that the rug makers were actually employing a classic conception of floor covering, in modified form, does not seem to have entered their minds. Yet it harks back to primitive, mosaic floor ornamentation, choice in design and superb in color. Mediums were varied to conform to the special application of the mosaic and it is in this respect that the mosaic rug is distinctive. It shows a transition akin to that which took place in the prehistoric era, during which stone work achieved the artistry that was later applied to textiles. The tesseræ are of fabric in mosaic rugs.

It is when these rugs take on the character of historic ornament that they reach their summit of perfection. Since this does not increase the work of the rug maker, nor add to the cost of the finished floor covering, there seems to be every reason in favor of spool rugs taking a new lease on life, as mosaic rugs, in which there is no hint of economy. Instead, there is a charm inherent in the antique background to set off to best advantage fine rugs in this structurally correct form.

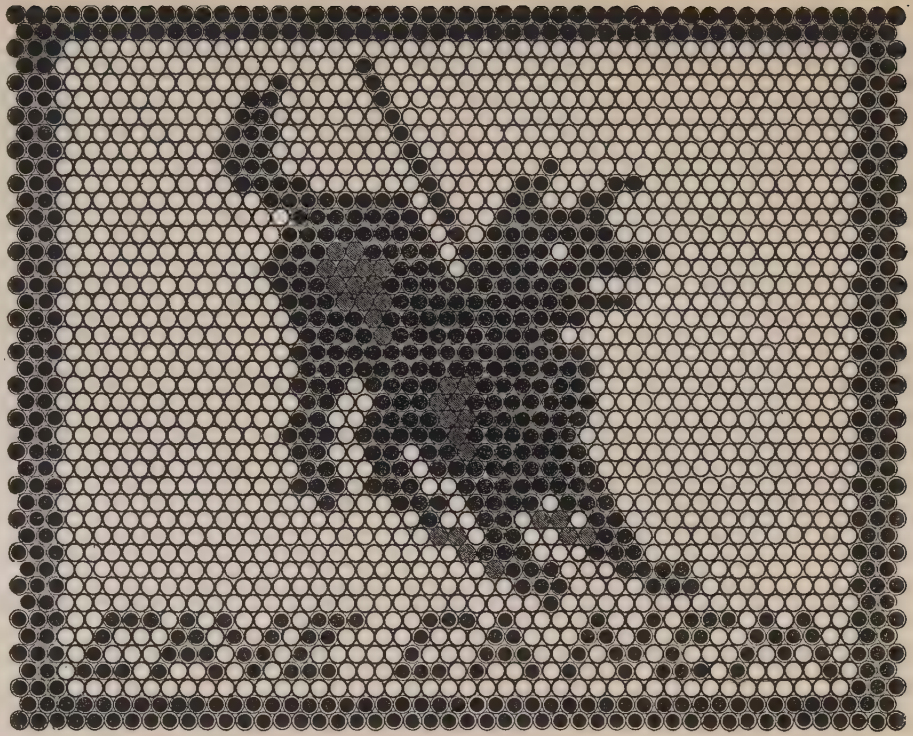
The mosaic rug illustrated is a reproduction of an ancient mosaic floor, over two thousand years old, revealed by excavations in Pompeii, and is copied as exactly as the circular spool motif permits. Those familiar with the " Cave Canem " (beware the dog!) mosaic will appreciate the fidelity of the reproduction. This famous design, with its caption, is inlaid in the threshold of a doorway leading from the *vestibulum* into a Pompeian bath or *atrium,* which was a main room of the house. It formed a salutation to guests or strangers, just as did the words " Ave " or " Have " which are often found. Friends evidently accepted the " Cave Canem " in the good spirit of those who appreciate that the dog of the household as well as the owner is a friend, while an importunate stranger might enter with a little hesitancy. The original use of the mosaic design supplies a precedent for its present application to fabric mosaic rugs for vestibules, or outer halls, and the more spacious main entrance halls in modern homes.

The " Cave Canem " rug has a delightfully whimsical

as well as classic character. It gives those who have traveled through Italy an immediate feeling of rapport, as they cross the threshold, being a floor covering of note to any one who has once seen it. It has the " smart " element that comes from decoration that is at once striking and suitable.

To complete the similarity of this replica to its original, it is developed in black and white fabric tesseræ, the dog and its confining leash being silhouetted in black against a white background. The spots on the dog's body and the sharp shadows of the forelegs are done in dark grey. However, this color scheme does not necessarily have to be copied, provided such colors as are substituted are in accord with ancient mosaic work. A grey, somewhat lighter in tone than the shadow, and like the grey of the marble, can be used in place of white in the field of the rug; or an old gold tone, recalling the gold so often lavishly employed in Italian mosaics, may be the choice. But two tones should be used, one modified for shadows and markings of the dog. Nothing is any way approximating dainty colors should ever be found in this or the other salutation rugs mentioned.

" Salve " is another salutation mosaic, lettered in black with a simple fret or Grecian border that can well be copied. It is in the vestibule floor of a grand mansion of an old New England estate, still preserved in its magnificence. One could not fail to recognize at a glance that the owners were much traveled persons. As a little child I can remember being impressed by the strangeness of the



"CAVE CANEM" (BEWARE THE DOG!)
A fabric replica of a Pompeian mosaic

greeting, until my mother translated it for me; but it never lost its thrill for me whenever I crossed the threshold. There was no other ornamentation save the well centered word and the chaste border. This latter has to be slightly altered, when used in fabric mosaic, in order to fit in with the structural demands of diagonal lines extending over the rug. However, the fret is often so modified. The corners and one fret motif should be worked out on architect's crossbar paper before starting to stitch the fabric tesseræ to the foundation, but no further pattern is needed for the border. The word should also be lettered in the same way. The strokes will naturally come on a slant, and not be in block letter form.

The pattern of the " Cave Canem " rug can be followed as definitely and easily as any cross-stitch design. Each mosaic bit, or tessera, corresponds to one complete motif in the spool rug, which, as has been seen, may be of two or three graduated discs. In the rug in question, two are used because they best simulate the original mosaic, the line of the under circle corresponding to the " setting cement " of a tessellated floor in the work known as *opus sectile*. (Directions for making the " Cave Canem " rug will be found in the back of the book.)

Nothing could be easier in rugcraft than the making of a fabric mosaic rug, which consists of cutting out the motifs, arranging and securing them to a foundation, lining the rug and finishing off the edges. Fringe may be added to the ends. In most rugs, this is desirable.

One of the advantages in making mosaic rugs is that

all the tesseræ can be cut out and put together before any work on the rug itself is done. As the discs are small, the work of preparing them is light, and is as attractive as any fancywork. Each disc applied above another should be perfectly centered so that the encircling rim of color in the disc beneath will be of uniform width.

A material that lends itself perfectly to fabric mosaic rugs is woven felt. In some weights and in the finest of weaves and finishes this is called "billiard cloth"; but for rug making no such fine grade is required. This woven felt is strong and can be had in many weights and thicknesses, and does not fray nor separate. Fiber ("true") felt, and any closely woven material that does not fray and has a firm "body" — such as broadcloth, a high grade of flannel known as "Lady's cloth," men's suiting, etc. — are all admirable. The felt from old hats and other articles can be used thriftily, as in other felt rugs, and discarded clothing of the right kind, as in rag rugs.

If goods with a tendency to fray is employed, all edges must be blanket-stitched. This stitchery may serve a double purpose, as it can join circles together at the same time that it stops raveling of threads. Use a basting-stitch or two to hold layers of cloth together and then blanket-stitch each rim down to the cloth beneath, when making the motifs, at this time leaving the largest rim untouched with the decorative embroidery. It should be lightly overcast to prevent fraying when handled. When the motifs are sewed to the foundation, blanket-stitch the

edge of each under-disc down onto the foundation, thus simultaneously finishing the edge and fastening it in its designated place.

When edges do not require embroidery, it should be omitted, and each disc held down by four stitches close to its edge. The top stitches should be so short that they are scarcely visible, being of thread to match the color of the disc, and should be taken at quarter distances along the edge. Long under-stitches should be taken and the stitches set so that in each layer they come in alternate quarters of circumferences. This method of stitchery results in a rug surface that, to all intents and purposes, is unbroken and flat.

The old-fashioned method of holding the motifs down to the foundation by stitches in the center only, has its disadvantages, for dust will penetrate beneath the discs and then it is something of a job to keep the rug clean. In the method advised, and sometimes used in old rugs, this is obviated.

A modern method of adding security to motifs and stitchery is to use some one of the various " rug cements." While this can scarcely be considered within the legitimate scope of handmade rugs, the prevalent and effective use of such cements cannot be ignored.

When stitches are used in the center of motifs, any one of three kinds can be employed — cross-stitch, star or double cross-stitch, and French knots. The first two are flat stitches, and in this have an advantage over French knots that do not lie flat. In mosaic rugs and all those in

which stitchery is not desired, either for necessity or ornamentation, the color of thread employed should match the disc on which it appears. Contrasting tones in other rugs may add flecks of gaiety or be in black or some very dark tone to subdue gay shades or to punctuate distances with rhythmic regularity. In all the embroideries, a single color is best to employ for a rug, unless the variations are systematic, in which case the color in all duplicating motifs employed in decorative rows or in a pattern should be identical.

The foundation for the fabric mosaic rug should be strong. Denim, ticking and burlap are those most generally used. The latter should be of a good grade. Its advantages lie in the regularity of the weave, which is sufficiently coarse, both lengthwise and crosswise, to be followed when marking off the goods into working divisions. The very large, heavy, linen bags in which produce is sometimes shipped, make a wonderful foundation fabric, but are difficult to obtain nowadays.

There are many ways of marking off foundations to insure the precision of motif-placing that is of utmost importance if rugs are to keep their structural symmetry throughout.

The surface can be divided by lines running parallel with the ends of the rug, each space being equal to the diameter of the largest disc. The work in this spacing is done from side to side in longitudinal rows extending from one end of the rug to the other, the colors of motifs being introduced as specified in the pattern or rough

drawing of the design. In this way, the chief irregularity of the rows comes at rug ends where fringe, set up well on the foundation beneath the last row, fills in the spaces. The semicircular ends of tesseræ protruding over the fringe, arranged evenly, should be run down to the foundation. This rug construction makes it possible to eliminate all half tesseræ, thus simplifying the work of making, besides giving a more expert finish to the floor covering.

It is when a rug conforms in shape to the limitations of its elements that it is found at its best. So any shape of a mosaic rug that necessitates the use of numerous portions of circles is to be avoided. Because old-time rug makers in this country disregarded this idea many of the dollar rugs were unworthy. It will be found that oblong rugs lend themselves best to mosaic work.

When rugs made according to the method described have a striped ticking foundation, the lines of the weave should run lengthwise of the rug. Also the material should be so chosen that stripes can be marked off into groups, the spaces between being equal to the diameter of the largest tessera. As ticking stripes come comparatively close together, this grouping of lines is an easy solution of the method of marking. The tesseræ in the first crosswise row sewed down close to the foundation edge should fit between the lines. In the second row each tessera should be wedged between those on the first row, and the diameter of each should come precisely across the line.

In each odd-number row, tesseræ come between lines; and in even-number rows the tesseræ have diameters across lines — following the method in the first two rows.

It is essential to keep the lengthwise rows even, and measurements should be taken every few rows to detect and rectify any divergence. Use a ruler or tape-measure, and reckon distances from the lengthwise edge to the lowest part of the circumference of tesseræ across the rug, not necessarily each tessera, but every three or four. This is the easiest method, for the construction of the rug does not lend itself to division lines readily owing to the "drop" design.

In the diagram three methods of forming the popular diamond design are shown.

Diagram one: In this a particularly interesting design results, in which three diamonds come across the rug field. Lengthwise edges are even, and the rug ends can be finished either with the half-tesseræ as shown, or with fringe, as in the method previously described. The foundation is divided into lengthwise halves and crosswise quarters. Each point, where the lines cross, has one tessera centered on it, and the tip of each diamond point comes across either a horizontal or vertical line.

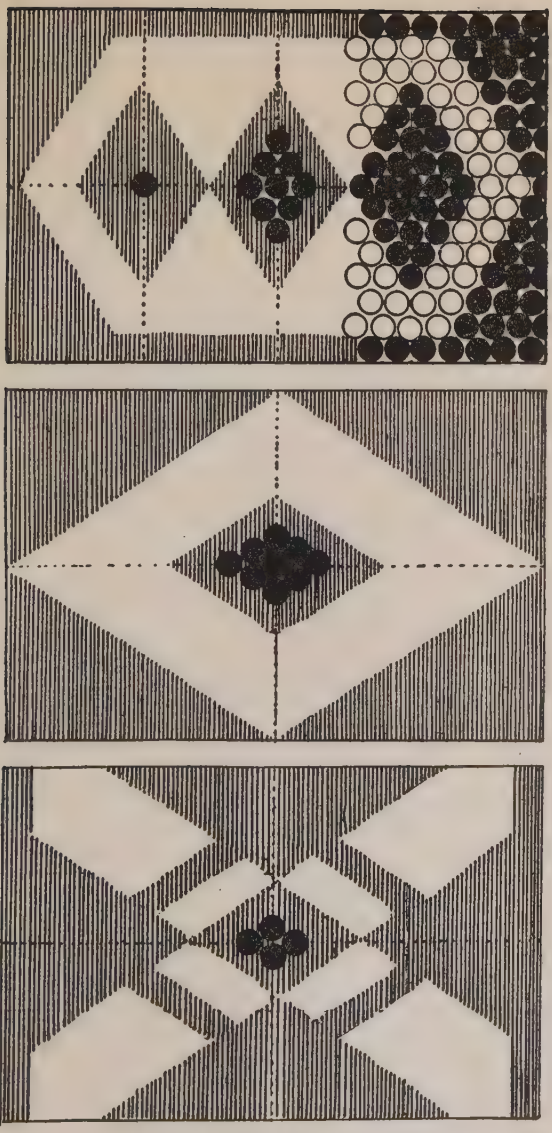
Gradually build up each diamond and when tips meet fill in the field and border, being sure that each crosswise line marked on the foundation has a tessera diameter exactly across it. This insures even rows in a very simple way.

The rug lends itself to many color varieties and harmonies. For instance, the center diamond and the border and cornerpieces can be of the dull red found in Oriental carpets; the end diamonds can be old blue; and the field, the warm tan or camel's-hair color often found in old rugs. Or, again, the centers of each diamond may vary from the outer rows and these shades be caught up again in field and border. Such color schemes lend dignity to rugs. If dainty colors are wanted to fit in with a boudoir scheme, the rug can be developed accordingly.

Diagrams two and three: In these the rug foundation is divided into quarters. One tessera in Number two is centered over the point where the lines cross. The diamond is given an opposite direction from Number one by laying the tesseræ on the line in a row across the rug. The same direction of the diamond is given in the arrangement of tesseræ in Number three, where they touch over the center point in the rug, rather than having one directly over it. This is an easy diamond formation to employ, as the first four tesseræ give the diamond center and building around it is easy.

In each of these diamonds, various color schemes can be carried out, and cornerpieces can be introduced; but it is always a medallion diamond rug, for the width is never sufficient in a properly shaped rug for more than one diamond.

When the character of the rug conforms more to the mosaic type, many possibilities of design present themselves. Small diamonds may fit together, or hexagons, in



RUG PATTERNS USING FABRIC TESSERÆ

an " all-over " pattern with a plain border. But most attractive of all this type of rug, by whatever name it is called, are the hall welcome-rugs with their inviting words, and the classic " Cave Canem " of the Days of Pompeii.

XIV

SCALLOPED OR PETAL RUGS

Although old-time petal or tongue rugs were negligible floor coverings, they can be very beautiful as made to-day. One antique petal rug which is a precedent for the modern ones, was developed in shades of wood-brown, intended to portray the seared tones of fallen leaves that in autumn carpet the ground beneath oak-trees. The cloth for this very odd and exceptional rug was dyed a soft and mellow brown, typical of these leaves. By using a strong solution of dye for petals to form the outer border rows, and by gradually watering the dye and decreasing the strength for subsequent rows, the gradation of color from the deepest dye to the lightest in the center of the rug was easily obtained. One of the grandchildren tells of this rug lying on the floor before the mantelpiece in the seldom-used parlor of the old homestead, and the repeated warnings not to step on it when she was permitted to go in and see the various things treasured in the room.

Occasionally, as in this case, some artistic rug maker would instill beauty into her scalloped rug by grading tones of a single color, and the leaf or petal idea is found in such rugs. They supply the rare instances in which the name "petal rug" was applied. As it is the one most worthy of continuance, because of immediately conveying the impression of beauty without any lack of struc-

tural significance, it is chosen herewith for use in this chapter. It will be proven especially consistent with present-day developments of this erstwhile odd and uninteresting type, into mats of pronounced charm in which design and color unite in ways hitherto unknown in scalloped floor coverings.

The scalloped, tongue or petal rug, by whichever term it is called, derives its name from the shape of the appliqué motifs. It belongs to the same family as the mosaic rug, the difference consisting in the shapes of the motifs and the way they are assembled, rather than in the manner of construction. It is also closely allied to the appliqué patchwork rug, for each motif is of fabric, appliquéd to a foundation. In the petal rug, the foundation is completely hidden by the motifs, while in the appliqué patchwork, the surface into which they are secured is visible.

By whichever name this rug is called, so definite is it that it would seem to restrict the shape of the motifs with like precision; but such is not the case. The contour may actually be that of some classic unit, such as the fish-scale or the shell, or it may be in the shape of a fan. Consistency is then disregarded, and the rug still comes under one of the three names given.

This does not necessarily mean that those who originally created the rugs were unacquainted with classic motifs, but that in the early days of American settler life, the people chose simple and homely terms of expression. Witness the name "washboard mat." Why not "fluted"

or "corrugated"—words quite as apt, and far more euphonious, though not to the liking of the pioneers. So also were "caterpillar braid" and "caterpillar rugs" terms of their choosing in preference to the more elegant sounding "chenille," which is equally descriptive and accurate. We find the same tendency in the rugs now under discussion.

It is true that just as the name was a bit crude, so also were the rugs. The textiles used were uninteresting, likewise the color schemes and combinations. Old-time scalloped rugs have little to recommend them beyond ingenuity and age, characteristics for which they are kept.

The faults of the antique mats cannot well be blamed upon the rug makers, who did the best with what they had. Textiles had not reached present-day diversity and color, and the dye-pot was seldom resorted to in scalloped rugcraft, as there was little need of matching scraps of fabric, and design did not enter into the making. Scalloped rugs were only attempted when the home-maker had a plentiful supply of cloth, heavy enough to be adequate. The colors were presumably sufficiently good for floor coverings, since they had been used previously for frocks and suits. It was in the arrangement of colors in contrasting rows or bands and in the hue of the thread used to finish off edges and secure them to foundations, that any semblance of pattern resulted or flecks of gay shades were introduced.

The modern rug illustrated, which employs both design and color, is the work of an artist skilled in the use

of pigments and acquainted with classical forms. It demonstrates the suitability of this rug technique to patterns far beyond those found in old scalloped mats. In it there is the suggestion of choice old cloisonné which fits in admirably with the era when these rugs were first being fashioned. (The rug is shown, in its harmonious color combination, on Plate XVII.)

Sea captains brought back many real art treasures and among them pieces of cloisonné from the Far East, or from England where they had been landed previously, and were purchasable. The furniture of the period showed Chinese influence, especially that of the master craftsman, Chippendale. Fabrics for hangings, embroidered shawls, etc., came from the Orient, together with rugs. It is therefore particularly appropriate that this novel petal rug pictured should reflect the Chinese spirit, while preserving the inherent "rag rug" quality of the craft. By this treatment it becomes no less well suited to Colonial decoration than if it were one of the crude scalloped mats that fail of real beauty.

In the rug pictured an apex of classic design in petal rug formation is reached. It is a criterion of excellence, without presenting any difficulties in making. (Plate XVII.)

The rug is developed in felt, and therefore requires no buttonholing to prevent fraying. If other fabrics that necessitate stitchery are chosen, use a dull yellow thread mercerized, to suggest the metal cloisons. Another thread, matching the color of the textile on which it is used, tacks

PLATE XVII "CLOISONNÉ" PETAL RUG

A choice example of scalloped or "tongue" door mat, revealing possibilities for artistry hitherto undeveloped. Note the coordination of structure with design, especially in centering the pattern.

each petal to the foundation fabric. The diagram shows the shapes of the petal units. It will be found in the back of the book with full directions.

A round rose rug is another modern type of petal rug. It is made in graduated shades of any natural rose color. The final rows of the rug that serve as a border for the darkest rose petals should be in green to suggest foliage. The center petals, which may be yellow to indicate stamens, should be somewhat smaller than those in other rows, in order that they may accommodate themselves to the smaller circumferences.

This same rug can be carried out in shades of lavender like an aster, or have the petals a trifle narrower and be in any chrysanthemum tones. In all of these guises it remains a flower-petal rug. If it is carried out in a formal instead of a realistic way, it retains the right to the name because of its petal formation. The Chinese influence may continue if the flower represents a peony, one Oriental meaning of this posy being wealth.

It is possible to develop pond-lily rugs with central flowers, on the order of those in the chrysanthemum-petal rug in cloisonné style. Or shades of violet can be blended against a background of mottled green to suggest violets growing on some shady bank.

In turning from these rugs that have their inspiration in flowers and leaves to those of more classic style we find that often the shapes of motifs are varied. In the fish-scale rug the shape links the rug with mosaic floor coverings, though the scales encroach upon one another as

in the petal rug. This pattern will be recognized by quilt enthusiasts as the fan design.

Whatever the size and shape of a petal rug may be, or the contour of units, the construction is the same. Each consists of a foundation and enough petals to cover it completely, allowing for necessary overlapping. There must be thread, either to match the petals or to contrast with them for the ornamental stitchery. The rug should be lined with a stout fabric; denim is recommended; in olden times ticking was used, but this does not give as presentable a reverse side to the rug. The binding may be tape, braid, or carpet binding. A coarse sewing-thread is needed for the plain sewing.

While ticking is not recommended for the rug lining, it has its advantage as a foundation textile for rectangular or square rugs. The blue stripes form gages for the units in one direction, and it is a simple matter with a yard-stick and a soft pencil to draw corresponding lines at right angles to these bars, for gages in the opposite direction. Denim is advised for round rugs. It can be marked off for contour and inner gaging circumferences in the same manner as the foundation for the round, ravel-pile, knit rug.

The tongue- or petal-shaped units should be cut from woolen cloth with a firm body. Cotton or linen is never used for these rugs; the texture is not suitable. Felt is excellent, and such fabrics as broadcloth, ladies' cloth, and other non-fraying textiles. They require no protective stitchery about edges. A textile likely to ravel is but-

tonholed, or blanket-stitched. A golden yellow silk or mercerized crochet-cotton, or black, is favored. Whichever is chosen, use it for all edges, except when the stitchery is done in tones matching the colors of textiles, in order that it may be inconspicuous.

Units are sewed along the straight edge to the foundation. Use the stout thread for this and also to tack the foundation and lining together. Take the tacking stitches under the petals where they will not show. Bind the lining and foundation together with braid or carpet binding, and sew with the same thread.

Patterns for units should be cut from paper, folded through the middle. Regulation tongue-shaped units should be cut straight across one end and slightly rounded at the other, with straight sides. Units may be three inches wide (when opened out) by four and one-half inches long, and from this size down to two by three inches.

Round rugs should have units for center rows smaller than for outer ones, since the circumferences are small around the center. Not more than two sizes were ordinarily used in old scalloped mats, but in modern petal rugs there is more freedom in this matter, as well as in shapes and arrangement of units. However the units are disposed, the straight end is never visible, while the curved end is always held flat to the foundation (and to the underlying straight unit ends which it conceals) by a single or double cross stitch taken near the tip. For this the embroidery silk is used.

The foundation may be any desired size that is a multi-

ple of the width of units to be sewed along the edge, for the units meet at edges but do not overlap along their sides. The cutting of units and the embroidery around the edges makes good "pick-up" work. All this should be done and the pieces assembled before the units are sewed to the foundation.

Commence work by pinning the units from the center of each lengthwise edge towards the corners. Proceed along crosswise edges in the same manner. Finally put in the corner units diagonally. The outer row of petal units is the first to be sewed to the foundation, and should completely encircle it. Each unit should extend sufficiently beyond the edge to form a scalloped border and conceal the foundation. The units are laid on the foundation precisely as shingles are laid on a roof: that is, each row overlaps the units of the row previously put on, forming what is called the "drop pattern" arrangement whereby the curved portion comes over the line between motifs, making rows alternate in order. Each motif should overlap those in the preceding row by one inch. This allows the straight end of each piece to be completely concealed.

In the usual rectangular rug without design, the short, narrow, center row has all units placed in a line, with the curved tips turned away from the center, half pointing one way, and half the other, while one motif, with curves at each end, fits directly over the middle of the rug. In this way all straight ends are neatly concealed. In a round rug, the pivotal unit is round. In a rug with a somewhat

irregular pattern, the arrangement must be such that the center row is taken care of by the design.

The foundation should be on a table when the motifs are sewed to it, and care must be exercised to keep it smooth. When the motifs are all sewed in position, and the cross stitches have been taken near their tips as described, line and bind the rug. When rugs take the actual floral formation, instead of the cross stitch, three straight lines may be done in outline-stitch, two diverging from the central perpendicular one, to give the effect of veins in leaves.

Petal rugs take but little time to make and but a small quantity of textile. Each motif lies flat and covers almost its full surface area of foundation. The only necessary calculating for material beyond that of the completed rug area is for the overlapping inch and the extension beyond the outer edge. There is a minimum amount of stitchery, much of which can be done in odd moments, hence the rapidity of the work. That the rugs can acquire genuine artistry is immediately recognized by a glance at the rug illustrated in Plate XVII.

Part IV

QUILTED, APPLIQUÉD AND EMBROIDERED RUGS

XV

QUILTED RUGS

Part I

Their History and Background

The quilted rug, like the young Phœnix of mythology, rises overnight from the ashes of the past, to assume its well-merited place in the realms of rugcraft. It has not lived on air for the same prescribed five hundred years, but it has actually been centuries since it had any vogue, notwithstanding its prestige of ancient lineage. By strange coincidence, the first quilted rug that comes to us intact pictures a tree, though one cannot assert that the tree is a palm. The gorgeous blossoms extending up and down its several branches preclude any such theory, for both the flower and leaf proclaim it to be an acanthus. The delicate traceries of foliage and vine which form a triple border are wrought, like the design on the field, in yellow, green, red and white.

Apparently this rug, which is a Persian prayer-rug, with the gracefully curved niche characteristic of Persian art, holds a place among quilted rugs comparable to that of the famous Ardebil carpet in Oriental rug lore, since each is apt to be pictured in connection with its special craft, and both are treasured in the Victoria and Albert

Museum in London. The two rugs are of Persian workmanship.

About 1925, after the art of quilting had been almost forgotten, in so far as its being pursued was concerned, there came a renaissance. From that time on, people have been fascinated by the possibilities of the craft for decorative purposes. Some of the work being done is reminiscent of the choice quilting of the ancients. Birds and flowers, people and animals, ships in full sail, feathers and fruit, etc., are now wrought in the stitchery of indented lines.

It is well at the very start to disabuse our minds of the idea that the purpose of quilting is to ornament quilts. It is true that this name for a coverlet comes from the particular form of stitchery which both embellishes and holds together the several thicknesses of goods.

The word *quilt* is derived from the Latin word *culcita,* going thence through the old French to *cuilte* and later to the English *quilt,* passing from the original meaning of a stuffed cushion or mattress to that of a coverlet in the final terminology.

America is the proud possessor of a few antique quilted and embroidered rugs, one of which is pictured. It is from the private collection of Dr. Frank Higgins, of Boston, who was so fortunate as to find it while travelling through the Orient. He discovered two in a famous rug bazaar in Constantinople, and this one, being by far the finer, was chosen. He had scarcely left the city when he regretted that he had not secured both of the unique art treasures,

but it was too late to get the other. He consoled himself with the belief that during further travels he would be able to pick up another. Though there were many rug marts which lay in his journey's path, no such good fortune awaited him. Such rugs are indeed rare, museums often not having one among their collections of carpets. (See the Frontispiece.)

This particular rug deserves the careful attention of all those who delight in antique rugs, and who contemplate following the fashion that prevails for quilting rugs. Not that a rug maker would consider fashioning a prayer-rug, which kind this is. A hearth-rug or bath-mat would be among the adaptations recommended. The shape of the *mihrab* is distinctly of the Turkish Kulah type, with its straight severity, but the design is definitely Persian. The stitchery itself is, of course, Oriental. The actual stitch unit is somewhat baffling, as it closely resembles what is now called triangular two-sided Turkish stitch. If such it is, the method of working is different. One is inclined to consider it an authentic Persian stitch, which has a close counterpart in Turkish work. For modern embroidery of quilted rugs, the classic chain-stitch is simpler and even older.

The colors of this quilted rug are a marvelous blending of hues that would at first strike one as somewhat incongruous, but so cleverly are they introduced that the exquisite gradations of tone found in nature are caught and held in meshes of silk. The predominating color of the flowers is a rich madder-rose, uninterrupted in the border

by any other color except touches of pink near the stem. All stems are in black, which also outlines each frond of foliage, embroidered throughout in the same shade of green. There are flecks of light azure hue in the blossoms. Golden yellow evidently indicates buds, for in the full-blown flower this yellow is subdued to a shade that would result from a blending of the madder and gold tones in a brownish orange.

Before turning from the old to the new quilted rugs, it is interesting to note a few traits of the classic work to help us understand how the craft can be used to perfection to-day in our rug making.

The East Indian quilting is rather more intricate and decidedly more pictorial than that of Persia. No pattern was too minute for the Indian needleworkers to portray with the same faithfulness to detail that a sculptor would evince. Indeed, the time-tinted cast of the centuries-old linen, the smoothness of the textile, with its bas-relief in stitchery, is worthily likened to carved ivory. This is more definitely brought out by the work being handled in tiled portions rather than in all-over patterns, an entire surface being divided into blocks, each with its special picture. Galleys, manned with oarsmen, rigged ships sailing, kings, warriors, castles, are all depicted, on a single piece of linen by no other means than a needle and some bits of soft filling-cloth, between the top and under linen. Heraldic devices sometimes appeared, as if done with an engraver's tool and not a sewing needle.

When we turn to the Persian quilting, we find a differ-

ence in style, which fortunately lends itself admirably to rug making as we would practise it to-day. The designs are not in miniature to the same extent as in the East Indian. They are broader in execution, and color is sometimes present. The quilting is put in more as a background to design than as a pattern in itself. And so we may liken Persian quilting to *repoussé* silk-work with its raised pattern, thrust into relief by means of such stitchery that it is, of itself, a thing of beauty. When the design is embroidered, a wealth of loveliness is presented. Stitchery is lavished upon it, yet with a dignity that indicates reserve. The quilted prayer-rug illustrated bears evidence of this.

An adaptation of early Persian quilting of this sort is found in the quilted India prints. One coverlet comes vividly to mind. The colors in the design are subdued and restful in tone, the needlework varied and intricate, but not too insistent, as its whiteness merges into the body of the fabric, leaving but a faint tracery.

Still another variation of quilting is found in the later types in which the running stitch is done in color contrasting with the material. It now becomes a mode of accenting the pattern that does not rely upon lines alone. This calls to mind the old Spanish stitchery known as " Black Work." The latter name was applied to it from the fact that it was done in a black medium, like etching embroidery, while the former name referred to the country from which it came.

The advent of " Black Work " into England dates from

the time of Henry VIII, for it was his wife, Catherine of Aragon, one of the famous royal needlewomen, who brought the stitchery of the Moors from Spain when she came from that country to become the queen. More than once in her checkered career her life hung by as slender a thread as that of the embroidery silk which history relates was around her neck when she was summoned to one of her many trials in court. While the name of the work seems appropriate in consideration of the somber life of the one who brought it to the palace of the king, the other name, " Spanish stitch," is much more felicitous. Since the stitchery was especially the vogue for the decoration of bedrooms, the latter choice is happier.

When a vogue calls for black, however, the color seems smart rather than lugubrious, and it is only in looking back on it, when in the midst of an era of gorgeous colorings, that anything peculiar is apparent. Black satin floor cushions are frequently found and the suitability to the use is considered excellent. So it is that we shall find in quilted rugs that black is a favorite hue for the fabric, when satin is employed. In the black satin quilting, however, there is not found the contrast of color characteristic of " Black Work," for the quilting matches the material, while in the Spanish embroidery the etching was in contrast to the linen, the thread being generally gold or yellow.

Apart from the " Black Work," the classic color, other than white, is yellow. The reason for the choice of this hue, with its shimmer of sunlight, is not far to seek. Its

likeness to gold is established and the gorgeous Chinese quiltings that came to England during the reign of King Charles I were actually enriched with threads of gold. Even some of the jeweled gowns of Queen Elizabeth were quilted in gold. So valuable were these threads that in a comparatively short time it became the mercenary fad of fashionable women to "drizzle" the embroideries, using special tools to pick out the fine gold wires lest some of the precious metal be lost, and the money gained by selling the gold so painstakingly collected diminished.

It is unfortunate that so much of the magnificence of old needlecraft has come under the touch of such spoilers, but it helps us to understand the high place of yellow silk, its less costly counterpart, in quilting. The reason for the use of yellow does not hold to-day, although its beauty in the quilting stitchery remains. The use of black and yellow, however, has set a stamp of approval from ancient days to the present time for the employment of color in the quilting. It can be used in these tones or in a special color to emphasize the scheme of the room for which the rug is made. It is this latter employment of color that is in favor to-day.

It was during the time when King Charles I was at the height of his reign that the Pilgrim Fathers set sail for America, and the wives of those ancestral worthies brought with them recollections, if not actual examples, of the magnificent quilting then so sanctioned by royalty. No qualms of conscience prevented them from introduc-

ing like splendor into their embroideries, for the pinch of poverty was active in excluding any taint of worldliness that might have crept into the earliest Colonial crafts. It was stern necessity that demanded extra coverlets for beds, and the materials were found in old clothing. These, after being pieced together, called for extra thickness to provide warmth; and quilting appeared, not as fancy-work, but as a competent form of stitchery.

The quilts made were often called rugs, just as table covers were called carpets. This is misleading when studying old records to find out what kinds of floor covering were in use. It must be remembered, however, that the words *carpet* and *rug* have always had such double significance, since a textile heavy enough to be of service as a covering for a bed was also heavy enough to be used on the floor. To-day we use bed-coverings in this same way, as instanced in Navajo blanket rugs.

Notwithstanding this duplex meaning, there seems to be no reason to believe that Colonial quilts, even though called "rugs," had any place among the coverings for the bare and draughty floors. There is an excellent reason for this omission. Quilted rugs are floor coverings that bespeak luxury. They are too exquisite to withstand hard wear, belonging, as they do, in the Occident more to the cushion than the carpet type of covering. In the East they can stand the wear of unshod feet, and it is there that they originated. During the period when quilting flourished in genuine beauty in America, rugs as we know them to-day were struggling for existence. They were

utilitarian, to the highest degree, stout and sturdy. Albeit, they were not lacking in a folk art of decided appeal.

Meanwhile, in Continental Europe and England the interest was focussing increasingly on rugs from the Orient, all of which went under the encompassing generic name of "Turkey Carpets." The struggle was to copy them and to make machinery that would weave floor coverings with power looms that would be of approximate worth in the world of textiles. It is not in the province of this present chapter to go more into the details of the difficulties overcome and the competition entailed. They are mentioned merely to indicate the prevailing conditions of this era, and to further present reasons why a rug, such as the quilted carpet of luxurious aspect, should have disappeared for so many centuries.

In other applications than that of rugcraft, quilting was by no means extinct, nor can it ever be, for there is nothing that quite takes its place, even in applied plain sewing. But the art of quilting so far declined during the nineteenth century that a French needlework book published at that time, and of marked excellence, entirely omits quilting, while an English embroidery book of similar nature describes it as practised for utilitarian purposes only. It goes on to say: "The run line backgrounds so frequently seen in high art crewel-work are intended to imitate Oriental quilting, and their designs are frequently taken from old Persian prayer-carpets and covers of ceremony." This reference to the Persian quilted carpets show their high place in handmade floor coverings.

In America we are indebted chiefly to the mountaineer women of the Southern Appalachians, and somewhat to the country folk of the New England States, for keeping alive the genuine art of quilting during this period of abeyance. The work is not of East Indian type, with its maze of needle-etched lines in which the design is laid in cords on a background overlaid with the fine surface linen run down on both sides of the cords. It savors more of the Persian art in which flowers and elaborate geometric patterns are featured. A distinguishing difference found in this country is that the all-over quilting prevails rather than the background stitchery characteristic of the Persian work.

Part II

The Craft Of The Modern Quilted Rug

Persia and India give precedent for two types of quilted rugs: the prayer-rug and the bath-mat. As we have seen, it is ill-advised to reproduce prayer-rugs. They are too precious and precise in their significance to be bandied about by those to whom the *mihrab* means nothing. The bath-mat remains one of perfect adaptability; and linen, the classic stuff, remains also the best fabric for it, though any stout washable goods may be used. But the modernized quilted rug is not confined in its scope to bath-mats alone. It reaches out into the field of fabric floor coverings in which embroidery and appliqué are featured.

Two other types present themselves for our consideration. Counting the bath-mat as one, the second is the cushioned carpet, a rug of luxury on the order of a floor cushion, flat and sumptuous withal; while the third is betwixt these two. It is not for any specific purpose, as is the bath-mat, nor is it so thick and soft as the cushion rug. It is in a class by itself, yet akin to both the others. It has the adaptability of the usual handmade rug in which the textile, the design, and coloring are criterions for correct usage.

The materials best suited to the cushioned rug are satin and its counterparts in decorative materials, in which silk may be cleverly intermixed with linen or cotton to add durability. A high grade of sateen — such as " farmer's satin," with its remarkable approach to genuine satin in its finish — and glazed chintz, in the non-cracking quality, are both excellent. Smart sets are made by having the quilted rug match the down puff in material and in quilting design. Or the coverlet may be an India print and the cushion rug be identical in design, but in smaller size. The quilting consists of outlining the chief motifs with a running stitch, taken through a wadded interlining. Such sets, while they are distinctly East Indian in type, conform to domestic decorative schemes, being well adapted to Colonial bedroom treatment, since it was during this era that the importation of articles from India flourished and made a deep impression in period decoration.

It will be seen that the quilted cushion rug, like " Black

Work," is best suited to boudoirs, and especially to bedside rugs, where the downy quality is welcome to bare feet. Nor is it any less acceptable to the knees to-day than it was to the ancient Persians who employed quilted rugs for prayer-mats. In children's rooms and in nurseries quilted rugs are felicitous for their soft texture, which, if coupled with appliqué ornamentation of Mother Goose characters, or animal or bird motifs, delights little folk.

The third type of quilted rug calls for material that will stand much harder wear than that used in either the bath-mat or the cushioned carpet, since its purpose is that of a scatter rug. Extra heavy linen in écru or other colors, heavy flannel, felt, suiting, in plain shades, etc., may be used, and even so ordinary a fabric as burlap, or denim. The ornamentation may be a border and medallion of appliqué. The field of the rug should be quilted and the outlines of the appliqué, but no stitchery should be over any part of the pattern. If embroidery is used, it should be entirely in chain-stitch, as this is the one used in the Persian antiques of earliest date. Entire motifs can be filled in with this stitchery as of old.

When we come to the actual making of the quilted rug we find that there are no difficulties of craftsmanship presented even to an amateur. The stitchery is always the ordinary running stitch, taken along the lines prescribed by a pattern. The preparation for the quilting consists of tacking, with loose basting stitches, a wadding of soft, fluffy cloth, such as outing flannel, Canton flannel, eiderdown cloth, cotton or wool wadding, etc., in one or

PLATE XVIII ACANTHUS SPRAY FROM QUILTED RUG

This is a detail of the Persian quilted linen prayer rug shown in the frontispiece.

Courtesy, Brooks Gill Co., Boston

PLATE XIX

INDIA NUMDAH RUG

The Tree of Life chain stitch is embroidered in gay Oriental colors. Note the uneven contour and finish of edge. (*See p. 286.*)

more thicknesses onto a foundation that forms the back of the rug; and again basting over this interlining, the fabric for the surface.

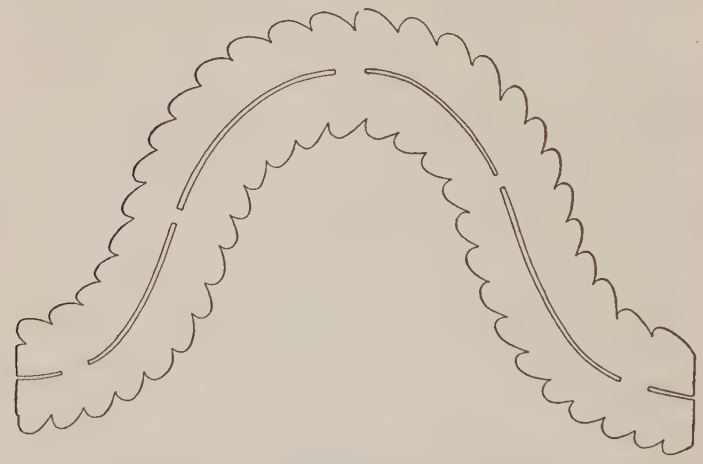
As quilted rugs are not of large dimensions, the work need not be put in a frame, provided the directions given are carefully followed, and the foundation and each succeeding layer of cloth is kept even and straight. It is necessary to put the layers together on some large table or on the floor, when a frame is not used. When once the parts are all basted together, the danger of any portion slipping is overcome. Any ornamentation other than the quilting that is to be on the rug should be done prior to the putting together of the portions. When a frame is used the quilting is done when the rug is on it. In lieu of a rug frame, curtain stretchers may be used.

Another method of preparation for quilting is to baste the interlining to the wrong side of the rug surface, and after the quilting is done, to sew the outer lining portion in place. This method is advisable for scatter rugs (the third group) and for some bath-mats. Cushion rugs are done in the first way, for the stitchery should go all the way through the rug.

There are many different ways of marking quilting patterns on rugs. The simplest is when the design consists of straight lines. These may be in horizontal and vertical rows forming squares, or be in uncrossed groups of diagonal lines in double or triple groupings, or they may cross and form diamonds, thus making the quaint " gamboised " quilting. In all of these uses of straight lines, the

design can be indicated, on most fabrics, by folding and pressing the goods before attaching the surface, so marked, to the rest of the rug. Nothing but accuracy in folding and pressing is required to bring out the pattern.

A second method which can be followed with all designs, however intricate, is to outline the pattern faintly



QUILTING MOLD IN FEATHER DESIGN, GREATLY REDUCED

with pencil on the rug surface, knowing that time and the rub of wear will shortly make the marks invisible. Or the design may be traced over impression paper and thus transferred to the rug. In England one method mentioned is to have the pattern distinctly outlined on tissue-paper basted to the rug surface. The stitching, then, is done through the paper. Considering the fragility of tissue-paper, this method seems precarious. However, trans-

parent papers are to be had that are stronger than ordinary tissue-paper. These may be used.

Another old-time method that is admirable is to have a zinc mold quilting motif. From this the pattern can be traced; or the mold itself, which is flat and firm, can be caught to the rug with a few stitches, and then the running outlines be made about it. Frequently the rug maker, by repeating the motif in different positions, can form designs of genuine grace and beauty. Old zinc quilting motifs are treasured. One, an heirloom owned by the writer, is in itself a thing of beauty, with its patina of age, toning the metal artistically. The fact that it served over a century ago to add ornament to many a quilt made in Philadelphia and its environs lends an atmosphere of charm to the quaint pattern, now used as a wall decoration — when not pressed into actual service again.

In some of the early quilting, the entire design was marked on the wrong side of the work, and the stitchery was done from that side also. It is a method followed in Europe to day, and is one to be highly recommended. In rug making, the design goes on the interlining. It may be stamped, or marked in any of the ways described. It does not show when the rug is completed. Baste the interlining, with the design side uppermost, onto the wrong side of the rug. Run the design through both thicknesses of goods. It may be interesting to note in passing that when the ancient quilters used this method of embroidering on the wrong side, they used chain-stitch so evenly done that on the right side there appeared unbroken out-

lines, each stitch exactly meeting the other in the identical needle-holes.

Expert quilters often make their own quilting designs, using such simple motifs and molds as a saucer or a plate. The round motif is known, in historic ornament, as the roundel. When semicircles, made with the saucer, come in alternating placement in straight rows a design is made which in historic ornament is known as the fish-scale. In Colonial parlance it goes by the name of the shell pattern. Segments of circles arranged in tiers form a pattern not unlike an open fan, by which name it is called. All these are excellent quilting designs for rugs; but also more pictorial patterns are appropriate, especially when the indented stitchery forms the sole ornamentation. Birds, flowers, singly or in baskets or vases, ships, and scenes, can all be employed as quilting patterns. The feather design is extremely popular, and crests and shields are in high favor. Elaborate designs are not shunned but sought.

The familiar method of " snapping " chalk designs on quilts is not feasible for quilted rug designs. Distances are short and it is easier to mark them than to " snap " them. Stitches should be as fine as the thickness of the work permits. Sewing the lining in last, after the design has been run through the two upper layers, allows for finer work than when all layers are quilted together.

" Corded quilting " is considered an up-to-date method of work that has much to recommend it. It is the essence of simplicity with marvelous results. In this, designs are simple and are run each side of the lines of the pattern.

A hollow tube is formed between the parallel rows of running stitches, taken through two thicknesses of fabric. Through these tubes, or spaces between lines, a filling cord is run. Gay cord run between thin materials shows through, giving a fascinating shimmer of color. In rugs the fabrics are too heavy for tones to be visible, but the quilting thread can be in color. The corded quilting brings out designs in relief most interestingly. The cords cannot form the sole wadding in rugs as it does in other articles, for floor covering requires a soft padding for the filled design as well as for the tread.

Unless a person knows how to do corded quilting it appears difficult, while in reality it is as easy as running ribbon in lingerie. The under fabric must be of a loose weave. In rugs, burlap is advised, and it is on this that the design is stamped or otherwise marked. A bodkin or ribbon runner is threaded with loosely twisted soft cord such as comes in dressmakers' supplies, or roving, or candlewicking, etc., in white or " natural " color. The tip is inserted at edges of work, when lines are straight, and the threaded bodkin is pushed through the space between the lines, until it emerges at the end of the tube across the rug, if it is a gamboised or checkerboard pattern. Each space between lines is so run until the pattern appears in full relief.

If the design is more complicated, as it is apt to be, the bodkin is inserted through interstices in the goods readily made large enough because of the looseness of the weave. Also it should be inserted at some point where it would

be natural for the design to start, and it must follow some definite course indicated by the design. To finish, the bodkin is pushed out through the loosely woven lining and the cord is clipped close to the work. In the coarse quilting of modern rugcraft, it is advisable to use a needle and thread and catch the cord ends to the lining. In fine work this is not necessary, as the pressure of the quilting is sufficient to hold the cords in place. And it may be in rugmaking, but by catching the ends security is assured. When the entire design has been thus run the rug is ready to be interlined, lined and finished off.

While this up-to-date method has a distinct appeal because of its simplicity, it is not in truth modern. The early Persians used it, some. The Indian quilting is a marvel of corded stitchery. The Persians employed a linen sufficiently sheer for running cords of blue to show through and accent the design done either in chain-stitch or running stitch in their favorite embroidery color, yellow. These two tones, yellow and blue, brought out the delicate creamy hue of the linen, creating a symphony in color and stitchery. When the thread used in the running stitches in the modern corded rug is in color, this ancient style is evidenced strikingly. Handsome rug materials lend themselves best to corded quilting.

Quilting is so chaste a form of embroidery that it lends dignity to fabrics, and charm to designs. In the smart cushion rug it alone supplies character to beauty of materials. In bath-mats appliqué is apt to unite with stitchery to complete the decoration. There can be no more

appropriate bath-mat than the quilted one. It is soft and absorbent, gratifying to the feet, and a sufficient protection for the floor. It washes like a towel. If a simple appliqué pattern is chosen, and the diamond (gamboised) quilting pattern is used, the rug can be made in a few hours, and be distinctive. This is also true of the appliqué quilted scatter rug. In this the indented stitchery frequently is more ornamental, but not necessarily harder to do. Each type of quilted rug has individuality.

XVI

FELT FLOOR COVERING

History and tradition unite in accrediting felt with being the first floor covering of a textile nature made by the aborigines. From the time of its invention to the present, it has continued to be used in the Far East for rugs. Its value has been recognized in the Western continent, where, since the time of its commercial manufacture, it has been more or less used for carpet " surrounds," linings, druggets, etc., and for some minor rugs. In the field of handmade floor coverings, it held a merely nominal place, until a recent vogue for felt, coincident with the renaissance of rugcraft, brought about a renewal of its use in a wide variety of ways.

Felt rugs are very quickly made, since they are of a fabric already suited to floor coverings. They are effective decoratively, and durable, provided the felt is correctly selected as to process of making and weight of goods. The material never frays, and therefore raw edges can be left without any protective finish whatsoever. Colors can be found to suit any scheme of a room, or to correspond with any necessities of pattern, as the scope and scale of the shades available are almost unlimited.

The rugs can be developed in smooth-faced or pile surfaces, and be ornamented with stitchery, patchwork appliqué, etc., or the felt can be cut in strips, and be used

as a flat working medium or for pile strands. But before taking up the actual making of felt rugs, it is wise to know something of the nature of the fabric, what it is, how made, the difference between true and woven felt, etc., in order to select the felt wisely, and use it to the best advantage.

The name " felt " is identical with the process of construction, for it is made by the matting down or " felting " of fibres that have a tendency to curl, or that have what is known as a " scale structure," which means an inherent waviness and inclination to fray at the tips.

The original method of making felt was to strew the ground beneath a tent, or inside a cave, or whatever the habitation was, with strands of hair, chiefly from the camel and goat; with fur; with particles of wool; or with fibres having the felting qualities mentioned. A thin layer was spread at first, and gradually more, when this was trodden under foot, until it was matted together securely, but not worn so smooth that no more particles would adhere. Eventually the ground was carpeted with a textile impervious to water, soft to the tread, and flexible, until its thickness prevented.

Felt rugs are made in Persia to-day by pounding the particles instead of treading on them. Occasionally a solution of rape-seed oil and water is sprinkled on the goods. Then more particles and more pounding.

In India the process of making felt rugs sounds more advanced. The particles are strewn on a mat of rushes bound together with thin cords. This " chappar " is then

rolled and pressed by the feet of natives for hours, during which time the rolling and unrolling is continual. At last the felt is taken out and moistened with soapy water. Then it is stretched on the " cheddar " until somewhat dryer, when patches of colored particles are put on, following some pattern, and the whole goes through the pressing and rolling process again. The finer kinds of felt so made are cut with a mowing knife to make all surfaces even. It is this sort that is used for carpets. Sometimes a rug is made of two pieces sewed together.

The thickness of these felts varies from three-quarters inch to three inches.

It will be seen by these accounts that it is quite within the bounds of possibility for any one to make the textile of a felt mat as well as to ornament it. No one, however, in this age would consider doing so, unless in dire need of a floor covering when cut off from access to stores, yet being where wool shearings were plentiful. Then the primitive method could be used successfully. Such a necessity and such circumstances might present themselves in some camp, or mining district.

There is a myth, chimerical, but entirely inaccurate, that accounts for the origin of felt. Once a monk, footsore during a long, hot journey through a sheep-grazing country, picked up a tiny tuft of wool and stuffed it into the heel of his shoe. This eased the chafing; and repeatedly, when needed, he put more wool particles into his shoe. When reaching his destination he found to his amazement that the pressure, combined with the moisture, had

made the particles firmly adhere to one another to form felt, a new fabric. It is strange that any credence should be given such a tale, for long before shoes were made, even of the crudest sort, felt was an old product. In fact, it is probable that felt was used for the making of some of the earliest footwear, just as it was used for outer garments, hats, armor, covers for tents, rugs, etc.

To-day the manufacturing of felt is shorn of all picturesque elements, but many practical ones are introduced to add durability, such as crossing the filmy sheets of particles in opposite directions, in the process of building up the fabric under moist pressure, in " true felt," also called " fiber felt." In " impregnated felt " other agents are actually added, giving name to the product, such as " iron impregnated felt," etc. When weaving is part of the manufacture, the textile is technically known as " thread-structure felt " to distinguish it from " true felt." Both of these felts are used in rugcraft.

The advantage of woven, or thread-structure felt for floor coverings is that it better withstands the grinding pressure of boot-heels. Both it and true felt grow stronger under steady pounding or direct weight, but neither can well outlast a rotary or frictional pressure, the true felt least of all. It must be remembered that in the Orient, rugs were never expected to have such hard usage. They were, and continue to be, stepped upon with bare or sandaled feet only.

In modern homes, rugs have severe tests, for they must keep their beauty under the shuffling of stout shoes, the

weight of furniture, and the constant shifting of chairs. The desirability of using woven felt is, therefore, apparent, particularly when handsome embroidered felt rugs of the Oriental sort are made. Two drawbacks immediately present themselves, however. One is the cost of this felt, and the other is that it comes in but few colors. Both may be overcome. Woven felt is used in paper factories, and sometimes may be purchased when discarded and at trifling cost. When cleansed and in good condition, it serves the purpose of foundations excellently. The light-weight woven felts can be bought in white, and dyed to order or in the family dye-pot.

Notwithstanding the advantages quoted in woven felt, the fact remains that true felt is the kind commonly used in rugcraft. It is easy to get, comes in a wide range of colors, and costs little. In truth, the rugs cost nothing except the foundation material, if discarded felt hats and other felt articles are cut into motifs and employed for decorative appliqué. Thrift suggests this method as practical, without interfering with the beauty of the rug.

A high grade of either woven or true felt is not essential to rugcraft. The matter of importance is that the foundation felt be thick and substantial. The light-weight woven felts are not unlike heavy flannel, or old-time ladies' cloth, a variety of broadcloth that is not so rich. Billiard cloth is the highest grade of woven felt, not very heavy, but very expensive. No one would consider using such a costly fabric, unless some good pieces were found in an old billiard table cover. Light or medium-weight felts

should be chosen for appliqué, while heavy felts should form foundations. These should be at least one-quarter inch thick. They are not difficult to procure, for true and woven felts are regularly made in extra-heavy weights — up to one, two and even three inches of thickness.

Felt rugs that are embroidered hold highest rank. The inspiration for these is found in the Numdah rugs from India, in which the embroidery has the charm of antique Persian and Indian stitchery. The genuine Numdah rugs were imported from the Orient about the year 1924. Previous to that time, as far as has been found, the only felt rugs imported were unornamented and in flat tones, chiefly grey, white and buff, with occasional small ones in black. The main use for the larger rugs was to go over handsome carpets in dining-rooms and living-rooms and for chamber rugs. Domestic printed felt rugs were also used for under-the-table druggets, in dining-rooms and in other main rooms.

This protective use is quite different from that prevalent in the Orient, where the felt is never laid over carpets, but *under* choice rugs to soften the tread on them and to form a neutral background to further enhance the exquisite nature of these handmade floor coverings. Travelers who have lived in the Far East recommend this use of felt in other parts of the world, for they realize the deterioration that results from using fine rugs on bare floors. Fortunately, felt rugs call for no such protection, as it is pressure against a firm foundation that aids the continued felting process of the fabric. If the grinding,

rotary, and frictional pressure could be eliminated, felt rugs would wear like iron.

Although the name of India is always given to Numdah rugs, patterns on them are distinctly Persian, in graceful vine, leaf, and floral designs in which birds are frequently introduced. The Tree of Life is a favorite. Borders are conspicuous by their absence. Edges are scraggy and so uneven that the shape of a rug sometimes resembles that of a tiger-skin shorn of claws and head. The edges dwindle to nothing while centers of rugs are thick. The size of a Numdah rug is never large, at least those imported to the United States. Neither are the rugs as small as door-mats, more nearly approximating good-sized hearth, or large prayer rugs. The embroidery is invariably in chain-stitch.

From this consideration of genuine Numdah rugs it is easy to realize what are the requisites for western homecraft replicas. The felt, preferably woven, though not necessarily so, should be heavy and in the rough, pebbly finish. White, grey, and black are the colors always available in extra-heavy weights, and buff may be. All these colors are correct, but it is unwise to select black, for in felt this hue is not a fast color. If the color runs it will ruin the beauty of the colored stitchery and much depends on the choice of colors for the embroidery. They must suit the type of design and have the tones peculiar to Oriental stitchery, as found in rugs, Kashmir shawls, etc.

Shapes may be rectangular. Many of the Numdah rugs

for foreign export are now so made. Or they may approximate the contours of those already referred to, thereby gaining an added Oriental influence. The edges may be made rough and irregular by tearing the felt apart, after it has been moistened, giving a finish which might be termed "deckle-edge." A coarse metal comb may be used to aid in tapering the textile and to further roughen the edges. Or the edges may be slashed every quarter-inch to the depth of two or two and one-half inches for a coarse short fringe.

The cost of foundation felt, which in this style of rug is the chief expense, can be decidedly diminished if, when buying it, calculation is made for two or three rugs, the width of the felt measuring off into at least two rug lengths, in which case a comparatively small quantity is needed. If the width is divided into three rug portions, one length of goods will make three rugs, all of which may be different in decoration.

If a Tree of Life pattern is chosen, it can be copied crudely from another Numdah rug or from any Oriental rug of such design. It is well to remember that all trees in historic ornament, however conventionalized, when used in stitchery are forms of the Tree of Life. The kind to select for the chain-stitch embroidery of Numdah rugs should not actually be conventionalized but have some naturalistic trend, according to Persian art. Do not attempt to make an elaborate design, nor be afraid of its being crude. Numdah rugs are crude themselves.

If preferred, bold floral designs may be transferred to the felt and be worked in the chain-stitch. The open flowers, leaves and buds should be joined by gracefully curving lines to indicate stems, even though there is no actual semblance of plant or vine in the pattern. These stems are not only effective in the stitch but are typically Persian. The floral and foliage motifs should be arranged artistically on the felt but need have no preconceived pattern design.

For the stitchery use a very coarse crewel needle or, if the felt is very thick, use a fur needle; this is triangular and cuts the goods easily instead of resisting it as a round needle does.

Wool yarn of the tapestry or crewel variety is right for the embroidery. The latter is better and comes in fine shades for Oriental stitchery. It is not necessary to have a coarse medium, for chain-stitch makes a curved double line and therefore broadens the outlines worked. By examining the rug pictured, which is a genuine India Numdah, it will be discovered that some of the motifs are filled in by series of rows of chain-stitching. This particular rug was selected for illustration because of its adaptability to homecraft rugs. It also is typical of the colors used in foundation and embroidery yarns.

The felt rugs that come next in rank to these embroidered in Numdah style are developed in appliqué commonly called "patchwork." These have been described in the latter part of the chapter "Old Patchwork for New Rugs." One essential to be stressed, apart from

the artistic element that must exist if the rugs are to be worth while, is the choice of a grade of felt for the foundation that will have weight enough to lie flat and remain firmly set on the floor. It may be added that the Numdah style of ornamentation can be carried out by substituting appliqué for the larger motifs and using chain-stitch for stemwork, which, in this case, should be heavy enough to correspond with the more substantial motifs. As appliqué was often used in old embroideries to simplify work, it is consistent to use it in these rugs, though they cannot be expected to have the same handsome character as when done in chain-stitch.

Mosaic rugs can also be developed excellently in felt, as was suggested in the chapter entitled "Fabric Mosaic." In short, felt can be used to good advantage in all rug-work in which a non-fraying textile is desirable, since the edges do not have to be finished in any way.

Felt strip rugs are usual, but unless the strips are of heavy-weight felt, they offer insufficient "body" for good floor coverings. These rugs are made precisely as is the simplified weaving taught in schools. To insure evenness, the warp strips should be thumbtacked to a board, or to a hooked-rug frame, each strand touching those next it. The weft of shorter-length strips is interlaced through this warp.

Any artistry that can be instilled into these mats comes through color combinations. If the first and last four warp strips (or more if the rug is sizable) are of black or some dark color, and an equal number of similar weft

strips are woven at the beginning and end of the mat, a border effect is gained. Corners will be squares in flat color, while in distances between, the shades of the field strips will appear in the border in checkerboard regularity.

All the strips should be of the same width, the warp strips being in color throughout the field. These may all be one tone and match the weft, making a one-toned field throughout; or the weft strands may be in contrast to the warp, supplying a checkerboard field. A heterogeneous array of colors in the field is inartistic. Fancy weaves may be introduced inconspicuously by skipping two strands when weaving and so arranging the spacing in consecutive rows that a diagonal pattern results. Not more than two strands should be skipped and these should never come over the same warp strands in consecutive rows, for this weakens the rug.

These felt woven rugs have a narrow fringe along all sides. It is made by leaving about three inches of warp and weft unwoven. To secure the edges firmly, a cross stitch to match the strands, or in contrast to them, is made in the center of each checkerboard square around the rug. Similar stitches may be put in each square or on special colored squares only. Black or yellow is a favorite hue for this stitchery. Tips of strands may be cut in fishtails or left straight. To cut the former, double each strand and snip a short diagonal sliver from center to tip. Unfold and the fishtail shape results.

Variety can be afforded these rugs when they have self-

toned centers, or are in two tones or colors only. Cut flat flowers from felt and scatter them over the rug field singly or in twos or threes. An occasional green felt leaf will provide diversity to the gay blossoms. A touch of artistry can thus be instilled into these rugs. When the shades of the rug accord with the color scheme of a room, the rug fits well into the decoration.

An entirely different style of rug is found in those made with a pile. In these, owing to the width of pile strands, it is not easy to carry out patterns, though design is a pronounced trait in other pile rugs. A neutral field, made by clever distribution of hit-or-miss colors, with a border in solid dark tone, can be pleasing, or colors in the field can be in masses harmoniously contrasting. These may be separated by narrow lines of black like the lead in stained glass windows.

Felt pile rugs are among the most thrifty of all floor coverings, for in them any scrap of felt as big as one inch by three-eighths inch can be employed. Use ticking for a foundation and sew each bit of felt, cut this size, onto it, by doubling through the center and securing with a few well-set stitches. Use the strips as gage-lines to insure evenness of pile.

A simpler method, that is not strictly craftsmanlike, is to sew the bits to the foundation by machine. Put the ticking under the feed, and place the crosswise center of each strip on one of the ticking lines, following either the blue or the white stripe down the entire length of the rug. No basting is necessary for each bit of felt can be

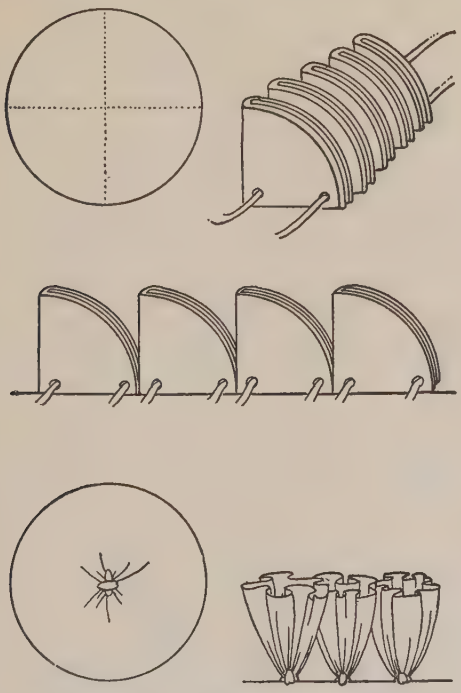
held close to the one last sewed, having its position always as described. Fold the felt ends back over the stitching when sewing the second, and each successive row, so that the stripe of the ticking is bared for the stitching. Rows should be about three-eighths inch apart so that the pile will stand up well.

One entirely handmade felt pile rug so fashioned has stood the test of seventy-five years of constant wear, and is still in perfect condition. Each year it grows more attractive as the colors take the tones that time alone can supply.

One type of penwiper rug has a curious pile, best developed in felt although any woolen bits may be used, preferably those that do not fray easily. It is the only rug that well deserves its descriptive name, although, as has been found in the chapter on patchwork appliqué rugs, others are so called, or mis-called. In this pile penwiper rug, the formation is precisely that of some penwipers, and a section of the rug could be removed and be transformed into penwipers at any time.

There are two ways of making the rug from the same unit formation, which is merely a small circle. Since a coin, a spool or button makes a correct pattern, the rug would come under such a classification were it not of such entirely different type. The pattern mold is the only thing in common, and this is comparatively small, one inch in diameter being a good size for the circle. A quarter or shilling is the right proportion, or a spool for A silk, or forty cotton.

Any wisp of woolen goods from which even a single circle an inch wide can be cut, can go into the making of the pile penwiper rug. Here again ticking, with stripes



CORDED AND TUFTED FABRIC PILE

spaced so that they form gages on which to sew the circles, should be used for a foundation, or any firm fabric with lines so spaced.

The simplest method of constructing the mats is to fold

each circle twice through the center, making a segment one quarter the size of the circle. Sew each segment to the foundation by two or three stitches taken through the point (center) of the segment and the foundation textile. Some rugmakers sew through the folded segment and then allow the folds to open as they will, while other workers prefer not to fold the circle, but to take the stitches directly through the center of the flat circle. In the latter instance the edges of the circle are caught with the fingers and thumb and drawn upright, after being stitched in place, without any attempt at regular folding.

In this method of construction the pile forms wee tufts with the edges of circles all of an even height. Each tuft must be sewed sufficiently close to the preceding one to make the edges remain upright, supplying a firm, even and substantial pile. Rows should be so spaced that the distance between them is equal to that between tufts in the row, for so only will the tufts be equally distant from each other.

These penwiper rugs with tufted pile are the earliest type. The hit-or-miss pattern prevailed, although it is quite within the range of the construction to include interesting designs, as will be seen from the account of the second method of making the rugs. In each method pattern is similarly introduced.

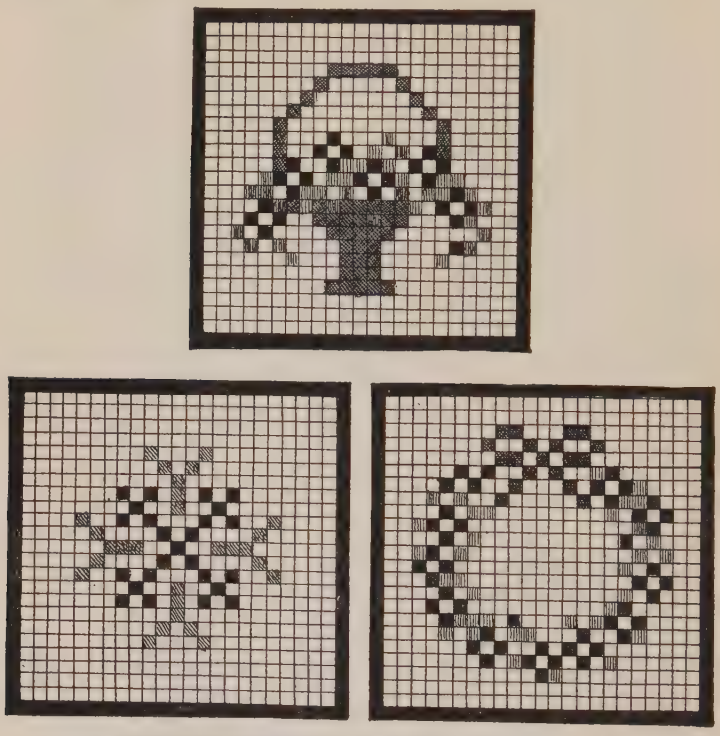
The second method of making these quaint rugs gives a corded appearance to the pile surface that is distinctly different from the tufted pile. Fold each circle as described, i.e., through the center to form a half-circle

and then this half-circle through the center to get the quarter-segment. String these segments together through the double folded edge, having one stout thread come near the center tip and one near the outer or circumference edge. If the rug is small in size these two stout threads may be the length or the width of the rug, according to the direction given the corded effect. When rugs are long, the danger of having long threads break is eliminated by using shorter ones. When this is the case, the break in the " cord " of segments must be overcome by joining the segments at the end of one and the beginning of another string. Do this sewing after the two strings have been positioned on the foundation.

It is necessary, in making the corded penwiper rug, to have the stripes in the ticking, or other firm striped foundation, so spaced that distances between stripes measure one-half inch, or whatever the half-diameter of the circles may be. Otherwise the stripes are of little value as gages.

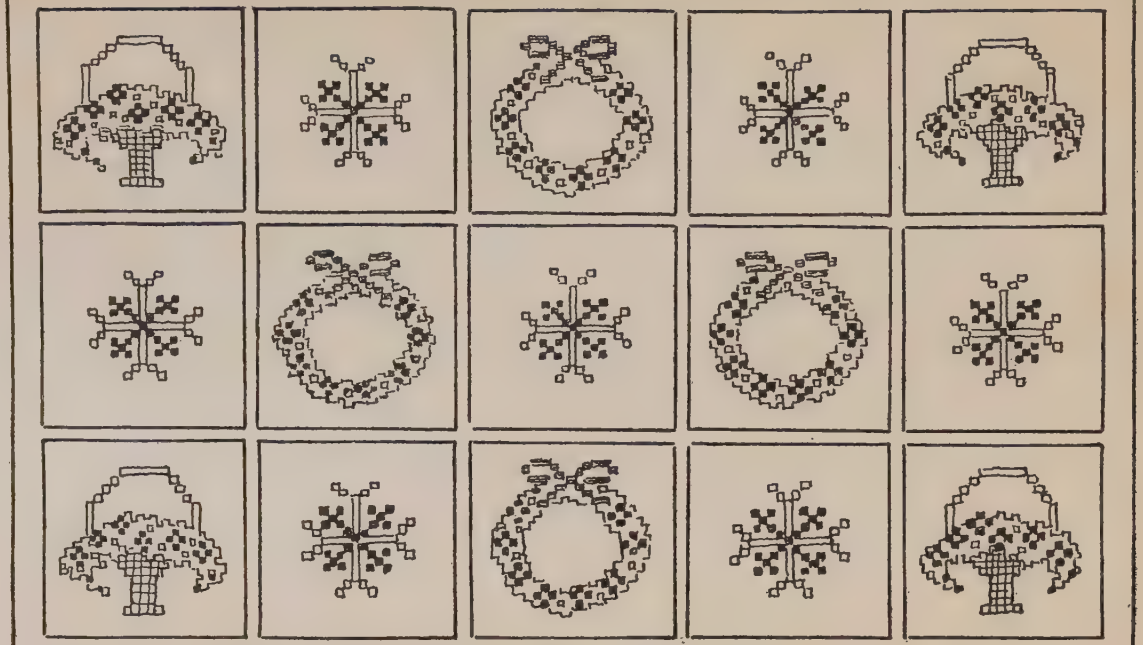
To sew the strings of segments to the foundation, take a stitch through the tip of each segment first. Then run the needle between the fold last made in the circle and catch the two thicknesses of cloth to the foundation with a stitch or two near the circumference edge. The thread will make a long stitch between the folds while two short ones will be taken at both the tip and near the edge. Segments are sewed consecutively onto the foundation. The thickness of the fabrics from which they are cut determines their spacing. In heavy cloth, one segment

will occupy about one-half inch in width as well as in length, but if the textile is thin, two at least will be required to make the width equal the length.



MOTIFS FOR PENWIPER TUFTED OR CORDED PILE

Each row of segments must just touch the other, to keep the undulating corded appearance. If they are closer, the pile pushes up and resembles the tufted pile. It is es-



TILE ARRANGEMENT OF PENWIPER MOTIFS

sential to keep the rows geometrically straight and precise, for unless the rows are perfectly parallel the beauty of the rug is impaired. By having the foundation marked off as in ticking, it is not at all difficult to keep this symmetry.

This very precision is an aid in making patterned penwiper rugs in corded or tufted style. When each segment occupies the space of a square, as it is likely to in either style, the copying of cross-stitch patterns is as easy as if the work were on canvas. Filet and bead-work patterns can be copied with equal facility. Geometric patterns found in weaving, in knot-tied and smooth-faced rugs, can be done by counted stitches. These patterns will be greatly enlarged owing to the size of the tufts. Hooked rug patterns can be used, although there is a freedom of technique permissible in them that must now be transposed into precision.

The tufted pile lends itself more readily to design than does the corded pile, for each tuft is sewed in place separately. Thus, for instance, a pattern may be drawn on a foundation and tufts sewed on regardless of the row formation, but following the design, and then the background filled in. When the cord pile is used the segments must be strung in sequence and rows numbered, each row corresponding to a line of filet, cross stitch, or weave.

It it advisable to sew corded strips onto the foundation as they are completed, when designs are carried out. It is then a simple matter to correct any fault in the stringing of colors, and the work can be kept true. A

width of border should be sewed on first, and each row be begun and ended with a corresponding width of the same color. An equal width of border must be sewed on to complete the "surround."

The segments will naturally spread sufficiently to fall over the edges of a foundation. The one exception to this may be in the final row in the cord pile. To avoid any discrepancies, omit the thread near the circumference in this row, and catch each alternate segment to the edge of the rug foundation (which has previously been turned in). As the stitches come through the foundation and may wear unless protected, these rugs should be lined. Denim is recommended. It is strong and good-looking.

These penwiper rugs in either style are easy to make and vie with the strip pile rugs in thrift. The rugs wear well, and, as has been seen, may be as ornamental as a hooked rug and as attractive in pattern as a cross-stitch or needle-point floor covering. They are soft to the tread, and therefore are delightful for bedroom floors. When carried out in rich tones they are equally appropriate for the main rooms of an informally decorated house, a cottage or farmhouse, though especially well suited to old-fashioned homes.

Surprising diversity can be instilled into felt rugs, whether smooth-faced or pile. While some of them described can be developed in other materials, all of them are seen to advantage when felt is the medium.

XVII

OLD PATCHWORK FOR NEW RUGS

Patchwork rugs are plebeian floor coverings of patrician ancestry. In this they are like the quilted rug, though quilting is not employed in patchwork rugs. Moreover, it is difficult to realize that the quaint and crude piecework and penwiper rugs of early Colonial days in America and the marvelous appliqué rugs that are in museums among the treasures of past centuries can belong in the same category. Yet each is a patchwork rug in the modern acceptation. Not only has the word become flexible, but the work also.

To one familiar with needlecraft the term "patchwork" is one to "conjure up a vision." The gorgeous *opus consutum* of bygone days with all its wealth of beauty is called to mind. So lavish was this cutwork appliqué in the heyday of the art, that not only were the foundation and overlaid fabrics of the finest, but precious stones and mother-of-pearl were inwrought, and strands of genuine gold and silver shone among the silken threads of the embroidery.

It is interesting to note the evolution of patchwork from its natural primitive origin to this pinnacle of perfection, and see how admirably it adapts itself to each requirement, even to rug making. Archæologists believe that, in the first instance, patchwork was the substitu-

tion of pieces of cloth in the place of bold splashes of paint or stain to form ornamental motifs and designs on a fabric foundation of contrasting color. It is a natural process of transition. Certain it is that the earliest fragments of decorative materials extant have among them examples of patchwork dating back to the time of King Solomon (tenth century B.C.), and it is considered uncertain whether the carving that shows an Assyrian carpet (705 B.C.) pictures an embroidered carpet or one ornamented with patchwork.

From these past ages to the present time patchwork appliqué has been prominent in needlecraft. A remarkable record this, showing less fluctuation in fashions than is commonly accorded to any one special type of work. There are periods when the *opus consutum,* united with exquisite stitchery, was magnificent. Such an era was during the fifteenth century, when needlework pictures rose to such a height that Botticelli was not averse to being attributed with the invention of "di Comesso," as it was then termed in Italy. But Varsari, who was responsible for such accrediting, could not have been as learned in needle art as in painting to have been unaware of the inception and rise of the embroidery that in his day was literally a vision of delight.

The people of India, whose needlework of the remote past has won the admiration of the world, employed, from the first, both the inlay and onlay patchwork. So cleverly are these done that they frequently appear to be part of the weave of the foundation itself. No patience was too

great to exert to bring beauty from this work, and no limit was put on the monetary outlay necessitated.

And so we find that patchwork is not a matter of "shreds and patches," but of artistic appliqué, that has come down to us through the ages. When it is used in rugs, it should reflect some of the inherent fine qualities. Delicate work is not called for. In fact, it is not correct on floor coverings. It is boldness of design and boldness of treatment that suit rugcraft, but these can reflect the spirit of ancient patchwork, when appliqué motifs are employed.

One of the advantages of patchwork appliqué in rugcraft is the rapidity with which the work can be done. A single bit of colored cloth applied to the foundation gives the effect of innumerable stitches. As a matter of fact, it was for this reason that appliqué was used in the Middle Ages; and it is as welcome to-day as then. It is divided into three types: onlay or true appliqué; inlay, a fitted or mosaic appliqué; and piecework, a name fast becoming obsolete in connection with patchwork, but which is perfect in its description, for pieces of material are sewed together to form a smooth, unbroken surface. One piece is not fitted into a space cut to conform in a foundation fabric, as is the case in inlay appliqué patchwork, but edges are joined or pieced together, to form squares, diamonds, or more complicated patterns. All of these kinds of patchwork are employed in modern rugs, but the onlay or true appliqué is the favorite.

Felt is the fabric that lends itself best to appliqué patch-

work, as it comes in very heavy weights suitable for foundations, and in lighter grades in a wide variety of colors which work out admirably for the cut-out motifs. It is a great mistake to employ light-weight felt for foundations. Felts are being put on the market for rug-craft that are so light and soft that they cannot prove satisfactory. They are flimsy for floor covering, which to be practical must lie flat and smooth on the floor without being easily kicked up.

Heavy cloakings and suitings are also excellent for foundations.

For motifs, any closely woven fabric that does not fray is suitable. Felt fulfils this requirement to perfection. It must be remembered, however, that felt does not withstand the scuffing of feet or any friction that breaks the surface. It grows tougher and firmer by pressure, not by friction. There does come a "woven felt" that is extremely durable, and is obtainable in many weights. It may even be several inches thick, like true felt. The woven goods is a warp-and-weft textile that is also felted. It is of course more expensive to buy new, than is the true felt, but it is used in paper factories, from which it is often possible to buy it after having been discarded there. It will be far from its pristine color, but it can be cleansed or dyed. With this for the foundation, and lighter-weight felt for motifs, the cost of the rug is minimized. Or if the rug maker has heavy cloth for the foundation, and pieces of non-fraying material that can be cut into motifs, the rug costs nothing but the labor of putting it together.

Designs should not be so simple that they at once proclaim the fact of little work. I have seen a few circles of cloth and a leaf or two in one corner of a felt rug considered ample ornamentation! Since the work is extremely rapid, such paucity of decoration is not commendable any more than it is sufficient.

An attractive rug, however, can be made from a piece of material twenty-seven by thirty-six inches. Blanket-stitch a band one and one-half inches wide in black or some very dark non-fraying fabric about the foundation edge, having the band onlaid. Blanket-stitch the inner edge, and bind the outer one with black braid. Five inches above this edge, onlay another similar narrow band and blanket-stitch both edges to the foundation. The center (nineteen by twenty-eight inches) is left unornamented, while the five-inch border has motifs appliquéd to it. These are secured to the foundation with blanket-stitches and can be joined, when necessary, with one-half inch felt stem-work, in curves or straight lines, as the pattern demands. These also are secured by blanket-stitches along each edge, or they may be worked over in herringbone-stitch. If preferred, chain-stitch may form the stems. A strong, coarse yarn should be used.

A design that immediately suggests itself as appropriate and dignified is a conventionalized lotus and leaf, since it is in Egypt that patchwork is reputed to have originated. As such a design has the desired simplicity and lends itself to quick work, it is admirable. However, any desired design that will fit into the five-inch border space

PATCHWORK RUG MOTIFS

East Indian cut-paper patterns. Two interpretations of The Tree of Life; and the knop and flower, from old Sindh pottery

can be used. A design from old Sindh pottery called the knop and flower is classic and adaptable.

A Persian border design, with its graceful curves of stems, encircling full-blown flowers, while buds and leaves sprout from the vine, is another with dignity and ease of workmanship. The flowers may be discs of color with indented edges, having stamens and pistils represented by smaller central discs of contrasting color. Centers may form a second layer of appliqué, as in the old-time button rug, or the larger discs may have the smaller one set down into it, in inlay appliqué. In this case, the larger disc is but a wide ring from which a portion, the size of the center disc, has been cut. This is an economical method, as it leaves the inner disc cut from the ring to be used for other appliqué. Care must be exercised in cutting rings and centers, for the two parts must fit precisely. Join portions, after fitting together, with herringbone-stitch, taken through the rug interlining or through a piece of cotton cloth on which the ring is basted preparatory to the inlay work.

A rug field may be ornamented with appliqué patchwork, as well as borders, but there should always be a well-defined line marking off the border, unless it is of inlay or onlay of a contrasting hue. Felt patchwork rugs are apt to be unlined and edges left raw. If a light-weight felt is used, lining will give it the necessary " body." Edges then are bound. Rugs made of cloth other than felt may be bound, or have the lining turned in and felled over the turned-back hem of the rug.

Patchwork rugs lend themselves well to interior decoration, for not only can wanted colors be included, but even designs from decorative fabrics. One of the more recent forms of patchwork appliqué, dating back two hundred and fifty years, called "Broaderie Perse," employed motifs cut from cretonne or other decorative textiles. In rugcraft, cretonne would be appropriate on linen or denim for summer cottages, if the designs were suitable in character and the rug were lined to give the correct "body." Motifs from heavier fabrics, such as brocades, tapestries, etc., could be used on wool foundations.

The ancient method of cutting designs for patchwork appliqué can be followed as successfully to-day as in the olden times. Sir George Birdwood tells in his book, "The Industrial Arts of India," how it was and still is done, for it is practised everywhere among the artistic peasantry of Europe. In describing the centuries-old work, he says: "They (the women) probably embroidered on cut patterns, and worked the larger patterns in appliqué into their work; and they cut the patterns by folding the cloth double, so as by one undulating or zigzag cut to get a two-sided symmetrical pattern. . . . The method of cutting out patterns in this way tends to perpetuate a symmetrical and rectangular representation of ornament." There are innumerable patterns of worth made in this way, some of them marvelous in their intricacy. It is a fascinating way to make our own pattern motifs.

One rug pattern illustrated is the knop and flower design reproduced from the ancient Sindh pottery and

found on textiles also. It is classic and lends itself admirably to patchwork rug making. One Tree of Life motif for the field of a rug is fantastic and fascinating. It can be developed in any colors, the shape being the matter of importance.

It is when rug motifs have a background of significance that they become interesting; and all historic ornament has this charm. Modern rug makers can instil this delightful quality into their rugs by employing old motifs or by following their lead when cutting out their own design motifs. Bizarre decoration is transient in appeal, but the classic gains by repetition. This thought should be held in mind, not alone in connection with patchwork rug motifs, but patterns for all rugs in whatever special form of craft they may be made.

The quaint penwiper rugs of Colonial days combine piecework with appliqué patchwork, but unfortunately they seldom have any genuine artistic appeal. Indeed, it is amazing how few patchwork rugs fashioned in the rug making epoch of the late eighteenth and the early nineteenth centuries have artistic merit. The most usual pattern was of squares of fabric bound with braid and sewed together to form a rug surface. In each square, or in alternate squares, some cut-out motif, such as a leaf, a circle, or a flower form, of contrasting cloth, would be appliquéd.

Evidently the old Colonial rug makers thought slightingly of patchwork rugs. To rectify such a mistake in judgment one has but to study the records of ancient

work, a glimpse of which has been given. The name of "Thought Work" was ascribed to the Armenian patchwork in which folklore was depicted.

It is for the modern rug maker to raise the standard of patchwork in rugcraft rather than to copy types lacking artistry. Fortunately, the vogue of patchwork rugs is here, and the opportunity is present.

XVIII

EMBROIDERED CARPETS AND RUGS IN DARNED STITCHERY

Embroidered carpets have, from the first, held a high place in ornamented textiles. According to Sir George Birdwood, " It would appear that carpets originated in embroidery and that carpets were first used like embroideries for hangings, etc."

As practically all homecraft rugs are dependent upon stitchery in one form or another for their development, it will be seen that the term " embroidered rugs " is too inclusive for any satisfactory and helpful results to be gained from their study unless the subject is subdivided. Some of the divisions result in creating distinctions in handicrafts such as are found in knitting, crocheting, quilting, while others, coming more strictly under the term of embroidery (as differentiated from stitchery) are dependent upon divisions in the technique of ornamental sewing. These finer points of discrimination are necessary in rugcraft, which must be closely studied for methods of work and the application of the embroideries. Hence the chapters on Cross stitch, Canvas Woven, Tapestry, etc., apart from embroidery restricted to a special style of rug.

Under the heading of this chapter those rugs only will be considered in which the embroidery is an incident of decoration and not an actual method of construction, and

in which the stitchery does not encroach upon any special type of rug elsewhere treated. The classification followed is one in common use. It signifies rugs in which the embroidery is seen in traceries of pattern and in solid stitchery worked upon a textile which may form a visible foundation background elsewhere.

Just what the stitches were in the prehistoric carpets referred to by Sir George Birdwood, and how they ornamented the carpets has not yet been discovered, but sufficient knowledge has been gained for two distinct types of stitches to assert themselves. Which of the two preceded the other in stitchery sequence is not determined. One is tent, and double tent, called cross stitch, dependent upon the weave for the construction of the embroidery on counted threads, built up as it is on the precision of warp and weft. The other is chain-stitch, dependent upon the primitive needle whereby all embroidery was done, and which tool had a crook instead of an eye. Chain-stitch is therefore unfettered by the structure of the woven textile, though this is frequently made use of to great advantage.

The two stitches are so entirely opposite in type and structure that one could not have evolved from the other. The problem then remains whether the textile or the tool was responsible for prehistoric embroidered rugs. The stitches would appear to have sprung into existence almost simultaneously. Cross stitch, which gives an extra durability to an entire foundation, has this in its favor in the realm of floor coverings. Chain-stitch, its rival, can but

ornament, though when so doing, it can be used as running stitch to secure other thicknesses of fabric to the under side of the surface textile, as in quilted rugs. Both cross stitch and quilted rugs are recognized types of such importance in rugcraft, that separate chapters are devoted to them, but this does not preclude the use of each stitch in rugs that come under the name of " embroidered carpets."

Besides cross stitch and chain-stitch, darned embroidery — which, too, has historic background — is now popular in rugcraft. There are also many other stitches, flat, effective, and suitable, that are at the command of the rug maker for her embroidered carpets.

Stout linen was used for embroidered rug foundations by the Persians and East Indians in their warmer climates, but heavy homespun in weights known as blanketing was favored by American settlers in their colder section of the globe. To-day, felt takes the place of blanketing. While it is not nearly so congenial to the needle, it can be had in weights suitable for rug making. No other should be used lest the sort of rug facetiously described as a " follow-up rug " result — one which refuses to lie flat and slides along the floor as it is stepped onto or off of. Neither felt nor blanketing resists the grinding wear of heels, though each mats or felts well under pressure.

The importation of India Numdah rugs, with their smart Oriental stitchery, has given an impetus to this type of embroidered handicraft rug. Chain-stitch is employed. The firmness of the fabric does away with the need of any frame. As these rugs are described fully in

the chapter on felt rugs, though they are distinctly embroidered floor coverings of the type coming under the classification of this chapter, they will not be described more fully here. Under the chapter on patchwork, another type of felt embroidered rugs will be found, in which appliqué takes the place of stitchery or supplements it.

There are some beautiful old embroidered carpets extant from Colonial and Early Victorian days. Plate XX shows one on homespun blanketing. It is of tambour work. A fine sense of design and a hint of knowledge of classic rug patterns is evident, for the Tree of Life is as clearly portrayed as on many an old Persian carpet. It is impossible to say at this date whether the design is an original expression of this famous motif, an adaptation of a rug pattern interpreted in the terms of Early American rugcraft, or whether the design was copied as exactly as possible from some ceramic ornamentation. By whatever way it found itself on the rug, there is represented in it the artistry of the young maiden, who by tradition made the rug, even to the spinning of the yarn and the weaving of the textile, as a part of her marriage portion. The embroidered carpet is made in two breadths, for no loom of that day could weave a material wide enough for a carpet.

As the word "carpet" was interchangeably used in olden times to designate a floor covering, a wall hanging, and a cover for a divan or table, this quaint carpet may well prove an inspiration for a wall hanging embroidered

to-day. To keep it true to type use a woolen homespun for the background. Canadian homespun is excellent, and not costly. The design should be open and in peasant style. It can be supplemented with appliqué.

A hanging of this sort in classic peasant art has the background of heavy, round-thread, linen textile. It is ornamented with braid, crocheted motifs, and stitchery. The basket is of openly plaited strips of brown braid, the blossoms and leaves are in coarse yarn, crocheted to form correct shapes, while ornamental stitchery supplies tendrils, stems, etc. It adorns the walls of an old-fashioned dining-room. As will be seen by the decoration, this hanging would not be suited to a floor covering, but is delightful as a hanging. However, the same kind of linen is excellent for rugs, both those embroidered with stitchery alone or with quilting as well. Sufficient body must be supplied in such rugs, either by the thicknesses of fabric that is united by quilting, or else by lining and interlining.

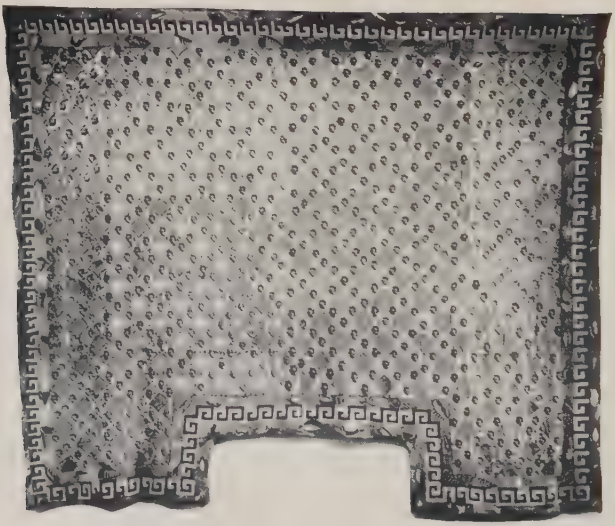
Among the early embroidered carpets of America that are notable, the one known as the Caswell carpet, now in the possession of Homer Eaton Keyes, Esq., is unparalleled for diversity of design and for size, in the type of stitchery, tambour work, in which it is developed. No two of the scores of squares or oblong sections that unite to make the carpet are duplicates, nor are they pictorially related. Each is a separate entity. In this feature the carpet outdoes the quaint patchwork quilt of coordinated pattern, which it would seem must have been the inspiration

Courtesy, The Magazine Antiques

PLATE XX EARLY AMERICAN EMBROIDERED RUG

The Tree of Life in chaste beauty of design and coloring developed in tambour work. *(Owned by Mrs. H. Payne Whitney.)*

Courtesy, The Magazine Antiques



Courtesy, Metropolitan Museum of Art

PLATE XXI TWO EMBROIDERED CARPETS

Above is a section of the Caswell carpet, done in tambour work. Below, a large cross stitch carpet made in 1840 for the Pliny Moore mansion. Note the space left for the hearth. (*Caswell carpet is owned by Homer Eaton Keyes.*)

for the special type of sectional structure used in the floor covering.

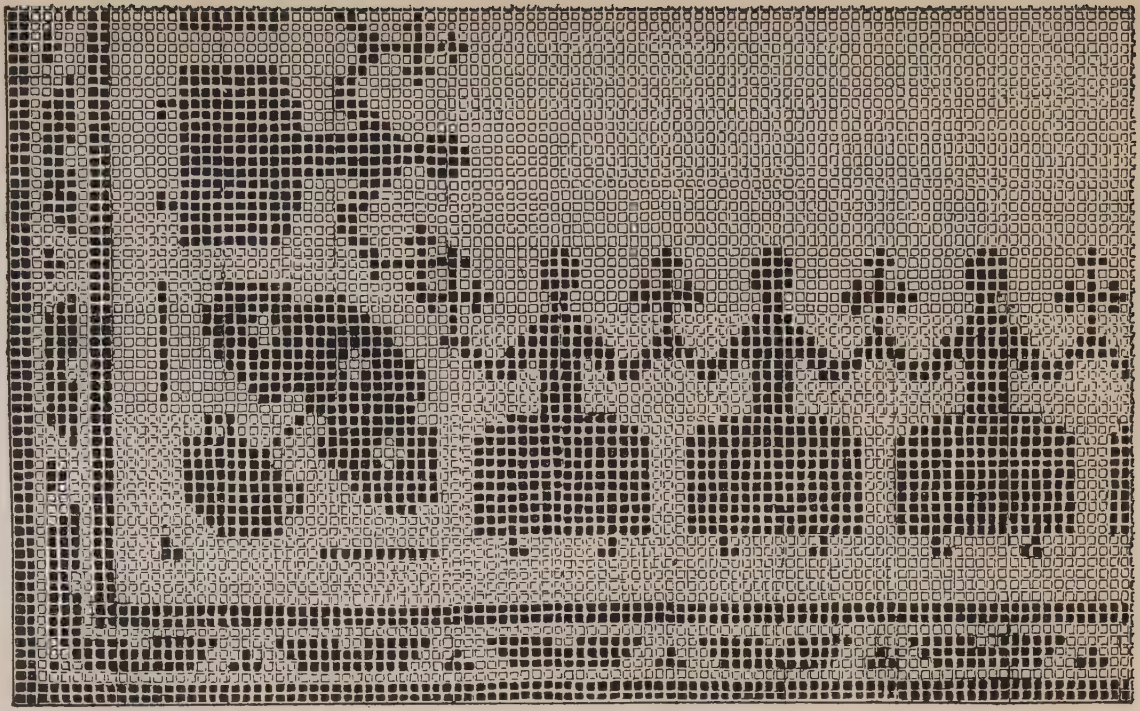
The carpet suggests the scattered pages of old-time picture books of unequal size, spread out and fitted together as best they could be, in which each page tells its own story or gives some particular delineation. One picture, for instance, of a woman presenting to a man a bit of fruit like an apple, immediately brings to mind the Biblical story of Adam and Eve and the apple, with the thought that the needle might have been substituted for the brush in reproducing an antiquated illustration. Some sections are reminiscent of gay English, French and India prints, while others are typical of designs found on ceramics. The colors are as soft as those found in an antique Seraband rug and the stitchery almost as profuse. Plate XXI faintly portrays the charm of one of the picture-page sections.

Whatever was the spur to the spectacular fancy of the maker, one Zeruiah Higley Guernsey, afterwards Mrs. Caswell by marriage, the carpet is expressive of a fertile imagination and a versatile personality. Not only did she design the carpet, but records state that she prepared all the materials which were home grown wool, home spun and home dyed, and the foundation home woven as in the Whitney rug. While the carpet represents her handiwork, she did receive some little help and had the kindly grace to acknowledge it by having the initials of the two persons worked in the sections they did. Her own name is lettered in full, together with the date 1835, which may

stand for the year of beginning the carpet, of its completion, or some interim between. Her helpers were two Indian boys known to have been guests of the family when the carpet was being made. The designs of the sections they worked are not Indian creations, however, for patterns prevailing in the Mid-Victorian era are typical throughout and nowhere show Indian characteristics, which are utterly dissimilar.

The Caswell carpet, like the Pliny Moore carpet, has a deep indentation along one side where the carpet fitted about a chimney or hearth. In the former the allowance was quite evidently made for a hearth instead of a chimney, as in the Moore carpet. The grounds for this deduction are established by the presence of an adjustable separate section in the Caswell carpet, which deftly fits into the indentation. When summer came and blazing logs were needed no more in the fireplace, it was safe to cover the hearth close to the fireboard, and this section then was set in position, giving symmetry to the floor covering.

Burlap was sometimes used in old-time embroidered rugs for the backgrounds, and so precedent is provided for the burlap embroidered rug of to-day. A good grade of the textile is now available. On it the stitchery of counted threads can be used. Since the weave is rectilinear Assisi work, cross stitch, etc., can bring out ancient Coptic designs and old Indian patterns, or the stitchery can be used to make silhouette rugs of up-to-date novelty. Chain-stitch worked without reference to the weave, and any



MARQUETRY MATS

Historic Medici figurines for marquetry and darned rugcraft

other stitches that are flat, can be employed for the rug embroidery. These rugs are excellent for cottages, chambers in which old-style painted furniture (not modernistic) is used, for farmhouses kept true to furnishings formerly standing in the rooms, for sun porches and upper halls.

A type of stitchery admirably adapted to rugcraft is found in darned embroidery. It has been put to some slight use, but in so simplified and modified a form that it bears little resemblance to the old-fashioned work. It remains for the present rug makers to raise the standard and make it worthy of its fine ancestry.

The stitch is nothing more nor less than that known in plain sewing as running. The rules transforming it into darned embroidery are to have the stitch on the right side of the work twice as long as on the wrong, and to have the work in rows with stitches alternately spaced. Only a few threads of the textile are caught up by the needle, or the upper stitch covering twice as many threads would be too long to wear well.

Any textile suited to embroidered rug making can be employed — linen, woolen homespun, burlap, etc., except cross-stitch canvas. This and textiles that cannot be left visible must be avoided.

Darned embroidery is one of antiquity in India. In the sixteenth century it was introduced into England, entering as much through Portugal as Spain (a usual source) owing to the alliance of royalty through King Charles with the Portuguese princess Catherine of Braganza. It

is worthy of note that needlecraft was, in the past, considered one of the fine arts to be cultivated. It traveled from one country to another and was seized upon as an asset of beauty in home-making and in secular as well as ecclesiastical art. Darning stitch is identical with that used in quilting which went from India, then Spain, Italy and Portugal, through the Arabs and Moors, and thence to England. In darning it is developed differently from quilting.

The East Indian darning is full of subtleties such as changing the direction of lines to conform to contours. This supplies not only an effect of shading, but even of action, as, for instance, when used in a raised arm or a leg thrust forward in walking or running. In this work the stitchery was employed to embroider the design. Today in rug making it may be put to the identical use or the darning may form the positive (worked) background to throw in relief the negative (unworked) design. Or again, both styles of embroidery may be used on the same rug.

Background darning was a pronounced feature in the renaissance of the work in the middle of the nineteenth century. Then patterns were bold rather than intricate. In rugcraft it is this later type of bold design that finds itself at home. It is used variously, sometimes to develop patterns and sometimes backgrounds, the positive pattern being more favored. It is scarcely more artistic in the heavier character of work demanded by rug making.

A definite type of darning embroidery having a vogue

in rugcraft uses a honeycomb or waffle canvas foundation. The medium is run under the raised bars formed by the weave. These bars separate the medium as if many smaller stitches were taken, though they are not. The work is a rapidly done embroidery in darning style, and is described fully in the chapter on Chenille Rugs, because chenille is a favorite medium for this work. Yarn and even rags can be used, however, as is there pointed out.

Darned rugs are not to be confused with marquetry embroidered rugs. The former can be done on any fabric suited to rug making as described, while the latter require a specific textile. All these rugs should be lined.

Embroidered rugs, whether done in cross stitch, chain-stitch, darning, etc., should be dignified in design and worked in shades of sufficient depth to suit the purpose. What are known as Oriental colors are commended.

XIX

RUGS OF CHENILLE AND CATERPILLAR BRAID. MARQUETRY MATS

Rugs of caterpillar braid are unlike any other type of homecraft rug, and, when expertly made, have a charm entirely their own. Among the notable designs used in these antique rugs is the " cabbage " mentioned with " cowcumbers " as sometimes found on rugs of " Turkey work." The thistle lends itself admirably, as do all flowers (preferably conventionalized) that have raggedy edges.

France is the country in which chenille was invented, about the middle of the eighteenth century. It was much used for court embroideries. No less a personage than Marie Antoinette embroidered with it and some of the articles she made are treasured. The chenille was in high favor for two reasons: its beauty and the rapidity with which embroidery could be done with it. It will be seen at once that such attributes lend themselves well to rug making.

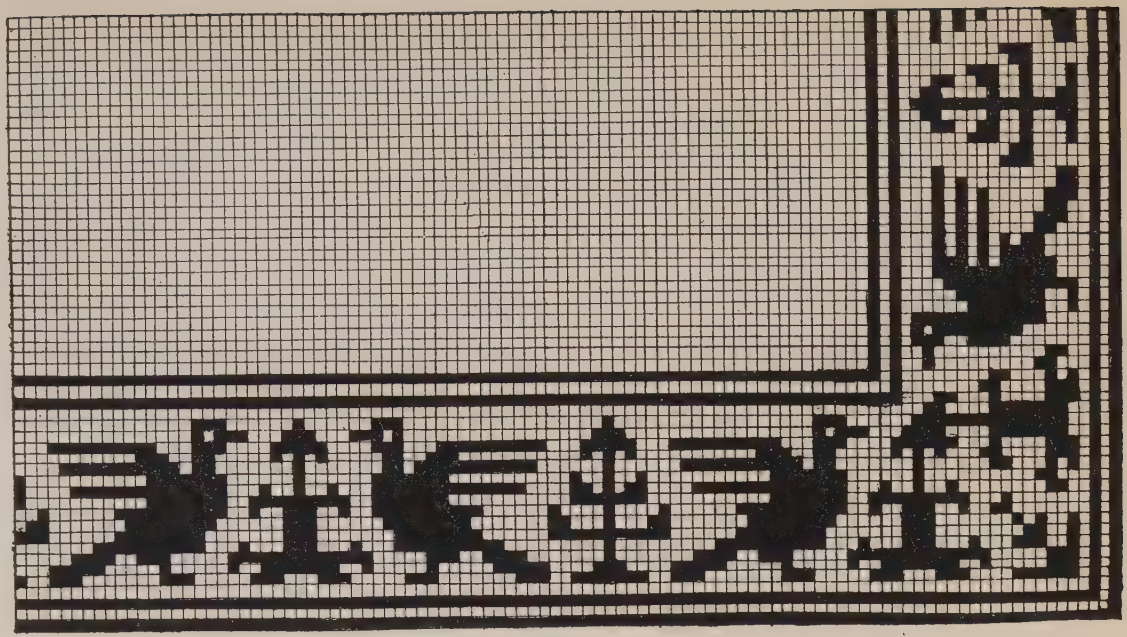
The French word *chenille,* when translated, has the same meaning as " caterpillar braid " in English. The soft delicacy of the fuzzy strands immediately suggests the slender, round and downy body of the larva insect. Manufactured chenille is the genuine medium. Caterpillar braid is its crude imitation.

Chenille may be of silk which is fine and so closely woven that it resembles a velvet cord, lustrous and flexible. Or the tiny filaments, spun at right angles into a central cord of cotton or linen, may be of worsted or linen. Whatever the pile, it gives name to the chenille, such as " cotton chenille," " worsted chenille," etc. Lady Llanover makes mention of a particular sort of worsted chenille, made on a flax cord, praising it because of its being impervious to moths, surely an excellent recommendation.

Homecraft chenille, or caterpillar braid, rugs belong to two classes: those fashioned from manufactured chenille, which, like yarn, can be bought for rug making, and those in which the yarn itself is homemade. The difference in type between these two is fundamental.

Chenille pile is so easily flattened down and so sinuous that, threaded into a chenille- or crewel-needle, it can be drawn through a textile like any heavy yarn, after which it will assume its former size and shape. This is because of its resilience. It is admirably suited to rug work on honeycomb canvas. It slips under the raised cross-strands of the weave with facility and fluffs out in the square or hexagon-shaped spaces between, usually filling them adequately with a single or double strand. It is better suited, from its inherent structure, than any other medium for embroidery on such a textile.

The stitchery, when wrought on honeycomb or waffle canvas, gives the effect of darning, though the threaded needle is merely run under the bars of the weave. When



ASSISI PATTERN

Positive pattern for marquetry rugs. The negative pattern is shown on page 185

these bars form hexagons, the canvas is called "honeycomb." When they form squares, "waffle cloth" is the usual name. These bars break the line of the embroidery medium, and no short stitches have to be taken as in regulation darning. On these textiles the work assumes a geometric precision and squareness that is responsible for the name of marquetry mats which is given them.

The running stitchery on such canvas is so easy that, in the latter part of the nineteenth century, it was called in England by the descriptive name of "Little Folk's Work." Whether this name came to America or not, the work did, and continued to employ the fingers of little folk over here for generations. I can well remember working mats of this very kind when I was a little girl, my mother having made the design, and I can testify to its marvelous rapidity and quaint effectiveness.

Such marquetry mats embroidered in chenille are suitable for summer cottage chambers and for bathroom floors. If for informal main rooms or halls, they should be developed in rather dark tones to give them rug character. They may be worked to carry out the color scheme of any interior. A mat in this work to spread on the floor to step on when getting out of a bath is excellent. For this, choose a white canvas foundation, and use rather delicate tones for the stitchery. A negative design (unworked) with a positive (worked) background picturing birds, as noted in Assisi work, would be appropriate and unique. Or the birds themselves may be done in the stitchery and the background left negative. There should, of course, be a

border; it may be of several rows of straight running, in consecutive lines, a Greek fret, or some other angular pattern.

Both design and background are frequently worked on honeycomb canvas. The design should be run in first and then the background. The material should be heavy enough for no rug frame to be necessary, though many workers prefer to thumbtack the foundation into either a rug frame or an embroidery frame. Threads must not be pulled taut but be allowed to lie smoothly and give with the goods. They must not, however, be so loose that they have the slightest serpentine effect.

No stamped or transfer pattern is needed, as the work is done with counted threads, or squares, as in cross stitch. It is easy to see how readily cross-stitch and filet patterns can be adapted to this embroidery. Designs can be copied from American basketry or motifs in ancient Peruvian art.[1]

Chenille hooked rugs have a marvelous finish, if a high grade of the medium is employed. Such rugs are not as cheap as rag rugs, more nearly approximating the cost of yarn-made hooked rugs. There are grades of cotten chenille, made for craft rugs, but while they are not expensive, neither can they be described as handsome. Yet they are strong and have the resilience of pile, germane to higher grades.

[1] Booklets published and for sale by the American Museum of Natural History, New York City, on basketry and Peruvian Art will be found helpful; also booklets of similar character, published by the Victoria and Albert Museum, South Kensington, London, England.

The thrifty way to make a chenille hooked rug is to ravel out old chenille portières or other articles, large enough to supply sufficient medium, and use the chenille ravelings. Many handsome homecraft chenille rugs are so made.

Chenille handicraft rugs may be loom-woven, using a simple frame loom. Such a rug resembles what has come to be known as a domestic Smyrna rug, for the pile or "fur," as the filaments are technically styled, protrudes on both sides of the warp, making a reversible floor covering. These should not be confused with manufactured chenille rugs, which are among the finest of all power-loom carpets. The reason for this is that the preparation of the chenille is elaborate, compared with other carpet yarns and the rugs themselves require a higher percentage of actual handwork than other loom-woven rugs. The filaments are pressed back, making a double row of pile, and this is positioned, combed up, and beaten home by hand-tools in much the same way that Oriental rugs are made. The rugs are totally unlike Smyrna rugs, but one kind of caterpillar craft rug is fashioned somewhat similarly.

To make one of these chenille Smyrna rugs, the needle shuttle is threaded with the chenille and is woven over and under each alternate warp thread.[2] Or if the loom has an adjustable heddle even of the simplest sort, all that is necessary in the weaving is to reverse the order of

[2] Directions for making a frame loom, and "warping" it, are given in full in the chapter on Needlewoven Rugs.

warp threads with it for each passage of the needle through the shed it creates, and then to press the weft firmly with a coarse comb against the already woven weft. Such a rug made with chenille has as much right to the name of Smyrna rug as has the domestic power-loom floor covering bearing the same name, although in the latter the rugs have patterns supposedly Oriental.

In turning from the chenille craft rugs made with the filament yarn to those in which the caterpillar braid is homemade, a difference is immediately apparent. They seem to have little in common, although the medium is handled in much the same fashion.

Caterpillar braid is similar to genuine chenille in being fuzzy and somewhat circular, but there the likeness ends. It is sufficient, however, to warrant a name of parallel significance. The braid is made by cutting a textile, preferably woolen, that has a tendency to fray, into narrow bias strips about one-half or three-quarters inch wide. The cord on which the filaments of genuine chenille is woven is represented by a strong gathering-thread run down the length of each strip, which may be of one piece of textile or several joined together. The braid after being gathered is drawn through the partly closed hand, which process increases the fraying. It is the frayed threads that correspond to the filaments or "fur" of chenille. The round formation of the braid is caused by rolling the strips between the palms. This braid is not used as real chenille "fur." It is sewed to a foundation on which a

design has been stamped or otherwise delineated, the colors of the braid bringing out the pattern.

If a rug of solid color is wanted with a banded border, as found in so many genuine chenille rugs, ticking is recommended for the foundation, as the stripes serve as gages to keep lines of work even.

If the rug has a pattern, denim, khaki or burlap is, as a rule, preferable, because plain, having no cross lines to distract from the design lines. Burlap is not as good as either of the other textiles, on account of the loose weave, which in some of the other craft rugwork is an advantage. In olden times, pieces of carpet, too worn for other use, were frequently employed, and are equally good to-day, as they supply an excellent body to the rugs.

When caterpillar rugs are made with the bias textile strips folded together from the gathering-string, they bear a resemblance to those made of chenille in which the filaments make a double width of "fur." Either medium is fastened to a foundation textile, by stitches taken through it and the medium. In caterpillar rugs, however, the strands are sewed to the foundation with needle and thread, not woven to it. The strips of fabric should be gathered enough to make them flare slightly at the ruffled edge, and should be sewed closely enough together to provide a pile, firm and fuzzy. Care should be taken to keep all edges upright, as in chenille rugs.

Before the sewing begins, the foundation should be bound or hemmed. If the rug is patterned, sew the caterpillar braid onto the design parts first, making the strands

follow the outline contours, and afterwards fill in the background. Unless the foundation is sufficiently heavy to hold its shape of itself, it is wise to put it on a hooked rug frame to prevent its puckering while the braid is being sewed on. The foundation must be straight, flat and even; otherwise, when the rug is completed the craftsmanship is poor and the rug will never be satisfactory.

A caterpillar braid rug, when in plain colors with perhaps a darker or contrasting bordered edge or band let into the surface near the edge, is in character with a large proportion of the genuine chenille rugs in its color scheme. It is advisable, when sewing the medium onto the foundation, to start with the edges and work in completed rows toward the center, each strand going all the way around the foundation. The nap should incline toward the edge. The center row should be opened and sewed through the flat center to give a perfect finish.

The stitchery on the rolled, caterpillar braid varies somewhat from the folded, gathered braid. The stitches must always catch down the gathering-thread firmly, which requires something of the care in "positioning" mentioned in connection with chenille weaving. Part of the work in that, it will be remembered, is also done by hand. The rolled braid must be sewed so close together that the pile is firm and none of the foundation is visible.

Of late years manufactured chenille made for handicraft rugs has given some impetus to the weaving of these rugs, but the making of caterpillar braid has gradually lost favor because of the labor involved. Those who have

old caterpillar braid rugs are fortunate, and should prize them, because of their quaint charm. Those who wish to fashion rugs that will be exclusive in craft, and into which fascinating design effects can be introduced, may well decide to make genuine caterpillar braid floor coverings.

Marquetry mats, whether employing commercial chenille, coarse rug yarn, narrow strips of silk stockings, or fine Jersey cloth, as the medium, are practical for the nursery, bathroom, and other rooms, as suggested previously. They are very quickly made and designs are brought out effectively, while the cost is very slight — all of which are points in their favor.

The process of making rugs of caterpillar braid is intriguing, as the making of the braid is so definitely an attempt to copy the beautiful French chenille. Often the use of the braid closely follows loom methods, but with such totally different results that the rugs bear little resemblance to one another.

Part V
RUGS OF MINOR SIGNIFICANCE

XX

SHUCK OR CORN-HUSK MATS

Shuck mats are distinctive as well as the essence of thrift, for in them it would appear that something for nothing has been attained. The mats are made and sold by the mountaineer women of Tennessee and Kentucky. Occasionally, after the husking season, when shucks abound, the mats are made also by women on farms scattered over the country. Those who buy the mats delight in unusual and ingenious folkcraft that is really good. So these mats have the distinction of gracing the floors as outer door mats in the homes of the wealthy and the poor alike. They are democratic in their adaptability to surroundings, and in looking equally well suited to each type of house.

The mats are pre-eminently door mats or floor coverings for verandas. For the latter purpose, they may be so large that the term rug would be natural to apply to them, just as it is used for grass and fiber mats. The name mat is so accurate and descriptive, however, that it seems a pity to abandon it for the more aristocratic name of rug in the lore of floor coverings.

The word mat signifies a texture of sedges, flags, or rushes; and rushes are described as "anything proverbially worthless." Corn-shucks, by right of texture and value, fulfill both conditions. They are closely allied bo-

tanically to the plants mentioned, and have been counted as worthless, proverbially, since the days of the Prodigal Son. To convert the shucks into attractive and useful mats is an achievement comparable only to the manipulating of rushes into seats for chairs. It is worthy of note that just as rush-bottomed chairs enjoy a renaissance periodically, so also do corn-husk or shuck mats.

Beyond a doubt, shuck mats had their origin and inspiration from necessity. They cost absolutely nothing, if homemade, except the thread with which the braids are sewed together. Yet they have a fascination apart from price valuation. The color is pleasing, with its insistent variation of the natural tone characteristic of dried shucks; the braided work is a favorite in rugcraft; the durability of the mats is remarkable; the rapidity of the work is appealing; the ingenious thriftiness tickles the fancy; and the mat has an element of the out-of-doors about it that immediately presupposes a place by the threshold of some outside door or on a porch. The medium is so admirably suited to the purpose of the mats that they bear the stamp of consistency, always gratifying.

Ingenuity is an essential ingredient of handicraft, and while thrift was the reason for shuck mats originally, it was ingenious thrift requiring imagination. Indeed it was inventiveness solely that inspired one young woman living in the beautiful Berkshire Hills to make a shuck mat. She told me that after watching her brother splice ropes she conceived the idea of splicing corn-husks. Wishing to make her strands prove useful as her brother did his

rope, she concluded to braid them and see if she could not make a door mat. It took her just one week to braid and sew enough spliced corn-husk strands for her mat. Her success in this venture can be reckoned by the fact that the mat was used for many years at the side door of the farmhouse, where it had the opportunity to test its strength daily by constant service in the wiping off of dusty and muddy boots. It was made for use and it had it in full measure.

For porch mats the dried shucks can be dyed to give them color which can be introduced into borders and bands. One hue may suffice, or several may be included. The field should be in the natural tone and also border bands, separating those of color. For veranda and sun-porch floor coverings, large shuck mats can be made. These, when finished with ornamental borders, have the attractiveness of the fancy grass rugs now so much in evidence for porches.

In connection with the dyes used for the borders, it is wise to prepare quite a bit more than needed at first. It is impossible to calculate with definiteness the amount of shucks that should be dyed for a given length of braid, since the size of sedges is so variable. By using the precautionary measure of having extra dyes, the identical shade can be duplicated in the easiest way.

Collecting shucks for mat making is a simple matter if one lives on a farm where corn for the table or for fodder is raised. Even if one lives in the city, and corn is a favorite vegetable, the shucks will accumulate surprisingly fast.

The husks should be separated, spread out and dried, preferably in the sun, bound into bundles, and saved like rags for rugs. Then when the opportunity comes, the shucks can be braided, and the mat making progress, whatever the season of year. The work is not without fascination and the result gratifying. If the rug maker chooses, she can start splicing and braiding the strands as soon as the shucks are dried. This I have found satisfactory.

The preparation of the shucks and the plaiting of them into braided mats is fraught with no difficulties. It is akin to the original mat making of pre-historic times, for it is generally agreed that floor coverings with any semblance of weaving were first made of grasses, sedges, and the like. They were intertwined to form a continuous flat surface, even though an uneven one. To-day more finesse is used in the making of mats of like character. The rudiments of weaving that the aborigines employed are apparent in their simplicity in braided shuck mats, while in textiles we have the weaving developed to the highest degree. It is easy to see that, if the primitives, with all their handicaps, made floor coverings of plaited strands, modern people more privileged than they, can fashion braided shuck mats with facility.

The strands for braiding should be made from as many shucks as will form a width from three-quarters to one inch wide, when united in a three-strand braid. Braids of this size, when slightly dampened, are as pliable as fabric. This they should be during the process of sewing together

when the mat is being made. Wider braids can be used, but they are not so manageable.

Start each strand by binding three, four, or five shucks together, alternating wide and tapering ends so that the bulk is equalized at the top and for some distance down the strand. Do not attempt to have husks come out evenly at the ends. This must be avoided, for it would mean the simultaneous introduction of another set of husks, and the joining would be noticeable. It is the continual inserting of one husk after another at irregular intervals that splices the strand together evenly and firmly as spliced rope, which is as strong at the juncture of joining as at any other part.

Another matter of importance is to keep the strand of uniform size. There should be no bulging nor diminishing of size that would be noticeable after the strands are plaited. It soon becomes second nature to detect discrepancies in strands. As soon as one is noticeable in any strand, tuck the tip of another husk under one of those in the strand, so that the joining is invisible and no loose end sticks out.

Continue the process of splicing and braiding the strands throughout the entire length needed for the rug, unless it is an extra large size. Then it may be easier to finish off a braid and sew the end as neatly as possible to the wrong side of the rug. When another length of braid, such as a gay border, is completed, begin the sewing again. Do not start it where the other ended, but at some other spot, thus preserving a uniformly even surface.

Shucks can be braided after they are partially dry, but not while they are green. Then they are too tender and are liable to tear. Moreover, they will mildew and discolor, and instead of having the soft play of color shading, from a deep cream to corn color, with occasional wisteria hues, spots will appear. Shucks braided when nearly dry are pliable. If absolutely dry they should be wrung out in a damp cloth precisely as if they were raffia. Do not immerse in water, for then they get so wet that the danger of mildewing returns.

As soon as a few yards of braid are finished, the sewing of the mat can begin. This I have found preferable to waiting until all the braiding is completed. Dampen the braid slightly to make it flexible. This is imperative if a round mat is to be made, for the curves are sharp in the center, and the strain on strands should be relieved. The forming and sewing of shuck braids into mats is precisely like that of other braided rugs, in round and oval shapes. These are the two styles in which shuck mats are made.

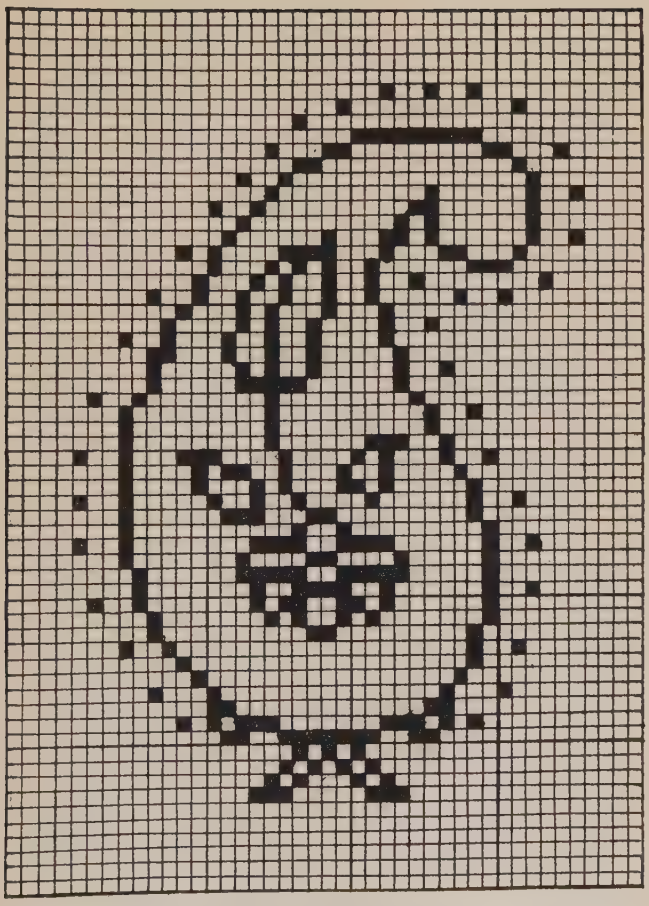
XXI

SACKING MATS AND STRING RUGS

Sacking mats derive their name from the fabric from which they are made. They would in America be called burlap mats to-day, had they originated in this era. Since they were developed in England when the material was called by the name of the purpose to which it was put, the mats went under the name of bagging or sacking mats. It is quite likely that they often were called by the more specific name of coffee-bagging mats, for the sacks in which coffee was imported into England were so termed interchangeably with sacking. It is also true that coffee-bags were made of a coarse, heavy linen, in some instances, so tightly woven as to be practically impervious to water, and so durable that they withstood the many handlings incident to shipping, and the hard usage, with no apparent detriment. It has been my good fortune to get some of these coffee-bean bags, and a more durable rug material it would be difficult indeed to find. Occasionally, to this day, such bags can be bought from retail grocers who buy coffee-beans direct from importers, and so get them in the sacks. The linen is badly soiled, of course, but by soaking and scrubbing and thoroughly rinsing it regains its natural color. A bag is so large that when ripped along the seams at one side and across one end, it is of sufficient size to make a seamless mat.

Sacking mats were made in England in the early part of the nineteenth century, possibly earlier, but the fact that Brussels carpet was sometimes recommended as the lining for such mats, certainly is illuminating. Carpets were estimated, in those years, as marvels of the weaver's skill, and treasured floor coverings in the home. To use a bit of carpet to line so insignificant a rug as a sacking mat indicates that the carpet must have been so badly worn as to be worthless in itself as a floor covering. Since Brussels carpets are noted for their durability, a mat, for which a worn strip formed the lining, could not have been fashioned when the century was very young. It is scarcely to be supposed, however, that Brussels carpet formed the first lining for sacking mats, nor that it was the most usual one, though the best. Consequently this reference to the carpet can be used only as a clue to the approximate time when sacking mats were in vogue as thrifty floor coverings.

Though used sporadically in rugcraft previous to this time, it is interesting to note that from that day to this, sacking, bagging, Hessian, or burlap, by whichever name it is called, has been favored for rug making. It is not usually employed, however, for anything except foundations, to be concealed by stitchery of one sort or another. It is the regulation hooked rug foundation fabric and has been from the early days, even though the finest hooked rugs made at first were on homespun linen. There are many instances, also, in which burlap was employed as a foundation for embroidery. It lends itself well in respect



PEAR OR JEWEL MOTIF

A motif to use in repetition on rug field in fine needlecraft, such as "Turky Worke," close canvas stitchery and embroidery

to its weave, for the threads run straight and are coarse enough for the embroidery of counted stitches, such as cross-stitch, tent-stitch, gobelin-stitch, and all canvas stitches.

Sacking was also used as the foundation for " string work " rugs in England. These rugs are often confused with hooked rugs because of the similarity of the surfaces of the two, which it must be confessed are practically identical. Hence the mistake is not strange. It is in the construction of the two types of rugs that the difference exists. Both the hooked rug and the string-work rug are made of loops of yarn forming a pile coming through a sacking foundation, but in the former the loops are pulled through, while in the latter they are pushed through. The string-work process of punching the yarn through the sacking is that of the punch-hooked rug work done with any one of several kinds of mechanical " punch-hooks." But again a difference is found. In string work the process is laborious for, after punching the four-inch strands of yarn through the interstices of the sacking, pushed apart with a large stiletto, the ends are all tied to prevent them from pulling out. In the punch-hook work a continuous strand of coarse yarn is threaded into the mechanical stiletto-like needle. It is then punched through the sacking and withdrawn, leaving a loop of yarn to be held by the pressure of the strands of the textile, which are continually forced more closely together as the work progresses.

It is possible with string work of this kind to make

exquisite knot-tied rugs, but they would be as arduous to construct as Oriental rugs and would lack the durability of the latter in which the knots come on the right side of the surface and have more resistance. The balance in favor of making string-work rugs is too small for them to be considered as anything but interesting nineteenth century thrift rugs. But they are essentially craft floor coverings.

The punch-hooked rug has speed in construction to recommend it, but it also has a certain definite mechanical quality that is at variance with true handicraft. While the old English string-work mats obviously preceded hooked rugs, and have definite similarities, they were but forerunners rather than incipient hooked rugs.

In the evolution of stitchery to suit rugcraft there is a much closer and more subtle transition to be found. In foundations, sacking remains the approved one.

Apart from the sacking rugs developed in what is known as " string work " described, there is another style that is equally true to type, and which rug makers of to-day can use to good advantage. This is the embroidered sacking mat, which is, in reality, but another form of the Phrygian or cross-stitch rug, for this stitch was the one originally employed on embroidered sacking mats. Since burlap to-day is made in an excellent grade, with needlecraft as one of its intended purposes, the foundations of sacking mats are more worthy of the stitchery than at any previous time. The burlap can be had in numerous tones, thus making it possible to introduce color in the founda-

tion of the rug as well as in the embroidery. Designs should be formal. Sacking mats embroidered in Assisi work take on a classic character that raises them above the ordinary level. Should the rugs be ornamented with appliqué, they enter the category of patchwork floor coverings. The one essential, whatever the ornamentation, is that the rug surface is invariably burlap, for it is this that keeps the rugs true to type.

Sacking mats, however developed, require lining. This has already been indicated. The quaint old mats were bordered with a fringe made by raveling out the sack ing, purposely left outside the embroidery. Strands of the yarn pulled through the sacking formed a gay upper layer of fringe. Another rug finish that lends itself well to these mats is a border of scalloped cloth in two layers. The colors should be those found in the rug surface and embroidery, while the buttonhole stitchery about each scallop should be in a like medium to that used on the rug. It may be black if not one of the dark-toned yarns.

When artistry is put into the pattern, the stitchery, and the color scheme of sacking rugs, they deserve a place among modern floor coverings that are quickly and easily made at small cost.

A close rival of the sacking mat, both from the viewpoint of its modest medium and its unpretentious name, is the string rug. It also originated in England. Both the names "sacking" and "string mats" remained on the other side of the water, even when rugs of the same sort or exact counterparts were included in American rugcraft.

One type of string rug has already been alluded to. Its right to the name springs from another definition of string than the one so familiar to us now, namely cord or cotton twine. It comes from the meaning of a slender strip and a connected series. No actual cord was used in the construction of the rug, but the entire surface was made of slender strips, either oddments of yarn or raveled jute, put together in a connected series, the sacking being the medium of connecting them successively. The tools were a stiletto and a crochet-hook to push and pull the strands through the foundation. The yarn and the ravelings were mere strings, odds and ends, as thriftily used as rags in rug making.

The difference in the construction of string mats and hooked rugs has already been sufficiently dwelt upon. There seems to have been little attention given to artistry in the string rugs, though they could so easily have been excellent in design. In hooked rag rugs patterns were featured.

The second type of string rugs derives its name from the fact that actual string was used in conjunction with odds and ends or "strings" of yarn, worsted or any "fleecy wool." These rugs come under the present classification of knitted rugs, fully described in the chapter on that subject.

In string rugs the knitting medium is invariably soft string. The number of stitches cast on is directed to be thirty-six, though for modern purposes this number does not have to be adhered to. The pile portion forming

the surface of the rug was made from the yarn tied together before using and wound into a ball.

It is apparent that the design must have been, always, that known to us as "hit-or-miss." Every alternate row of knitting was composed of loop pile made by winding the yarn three times over the fore-finger of the left hand, and knitting a coil into each stitch. The length of the rug depended on the length of the knitted strips, and its width on the number of strips. There was a chance lost for artistry in these rugs that can be captured in modernized string rugs; but the economy of the string foundation cannot be improved.

XXII

MINOR RUGS IN VARIETY

Under the heading of minor rugs in variety are grouped those made from peculiar mediums, such as carpet, stockings, candlewick, clothesline, paper, textile silk, etc.; those treated with pigments whether painted, dyed, stained or ornamented with stenciled patterns; and those which by virtue of their excessive thriftiness, rather than any other inherent qualifications, merit notice as seen in tidbit, tufted, ravel rugs, etc. In fact those rugs in which the medium has attained a certain prominence which, though novel and interesting, is not sufficient to make the rugs assume a major place.

The greater part of these rugs belong to the group in peculiar mediums. Since it is the material, and not the craft that is of import, it will be found that the rugs in every instance can be fashioned in more than one type. Therefore in former chapters when mediums have been noted, mention has been made of them. It is because in recent years there has been a tendency to make more minute classifications, that most of these minor rugs find themselves separately featured. Some have always been in a class by themselves, as instanced in old-time carpet rugs, while others are new, as well as different, such as paper rugs.

Carpet Rugs

Since the word carpet denotes all kinds of textile floor coverings, the term carpet rug would appear to be either a misnomer or a duplication of words, were it not for the fact that there is a particular kind of rug that bears this name. This rug sprang into prominence about 1825, though isolated carpet rugs were previously fashioned.

In order to appreciate the one-time value of carpet rugs it is necessary to realize the high place held by power-loom floor coverings during the period of their early manufacture. So accustomed have we become to finely made carpets to-day, that it comes with something of a surprise to know that it was not until a hundred years ago that they became a common commodity in home furnishings in America. The first carpet factory in the United States was set up in 1791. It took fifty years to bring the production to the place where it could meet, in any adequate way, the ever-increasing demand, putting the date forward to 1841.

Prior to 1800 these power-loom carpets, except those made on the first looms, were imported to America. They were costly and scarce. It is worthy of note in passing that, to-day, America is second to no country in the manufacture of power-loom carpets and rugs. It will be seen that in the Early American days, carpets naturally were prized possessions of householders. Every scrap of such floor covering was put to good use, in carpet rugs, covers for hassocks and footstools, etc. " Carpet-bags " re-

main historic in travelers' accoutrements of those times. But among all the uses to which odds and ends of carpet were put, that of carpet rugs is the one of immediate concern.

It was when carpets were so worn as to be unsightly that they began to be cut down into rug sizes. Finally when only small lengths were usable, handicraft was resorted to in order to increase the size and make them big enough and sufficiently ornamental to be worthy of use. The small pieces were bordered by many rows of rug braid, or of knit or crocheted strips. To-day these rugs do not hold any high place as floor coverings, but in the past they were rugs of prestige, denoting opulence in the homes where such carpets could be afforded. Gradually the time came when carpet centers were sought because they decreased the work required to make a rug, and it is for this same reason that to-day they are liked by busy home makers.

Another type of carpet rug was popular in the middle of the nineteenth century. It was made from ingrain carpet in single- two- or three-ply weights. It was cut into narrow lengths the edges of which formed the surface of pile fashioned from the strips. This type of carpet rug is recommended for modern use, as such rugs are durable, soft to the tread, and have an indefinite neutral color, minus pattern. These characteristics make them fit in well with present decorative schemes. The rugs can be door-mat or carpet size. In general appearance they are not unlike the rugs of Smyrna type that are reconstructed

by factory processes from old carpets and rugs sent to be transformed into such floor coverings.

The homecraft rugs are made by cutting diagonal strips one inch or one and one-quarter inches wide from the strong parts of smooth-faced carpets or rugs. The strips are sewed through the lengthwise center onto ticking or some equally strong foundation fabric. Ticking has its characteristic value in the color stripes of the weave, which can be taken advantage of as gages when sewing. Turn raw edges of the foundation over once onto the right side of the textile. Commence fashioning the rug by sewing a row of the bias carpet around the entire edge. Strips should not overlap when joined, but one end should fit against another as if one piece.

Each successive strip is sewed so close to the preceding one that all carpet edges are held upright by pressure; the thickness of the carpet determines the closeness. The upright bias edges fray slightly, just enough to supply a soft appearance to the stout pile. Since this deep pile is unpatterned, there should be a border of contrasting color, extending all about the edge, though it may be at each end only. It may be that the pieces from a second carpet or rug can supply such differing tone to the rug field, or it may be necessary to resort to the dye pot. If so, cut the strips before dyeing. They can be handled easier. These pile rugs are the best of the handicraft carpet rugs. They do not emphasize the fact that they are made to utilize old floor coverings, for in them thrift appears in its virtuous aspect.

The name carpet rug has become commercialized in those lengths of carpet, chiefly samples, that are sold with or without fringe for the purpose of handy scatter rugs. These are decidedly commonplace in any but plain carpet lengths, as they immediately bespeak their origin because patterns are interrupted and incomplete. However, the homecraft rug maker can follow this commercial suggestion, and in the same way use lengths from carpets she has.

It is quite possible for her to cut down and remodel a large carpet or rug and get a good-sized floor covering therefrom, especially if no attention is paid to matching the pattern. Such a rug should be sent to a dye house and be dyed a flat color. It then takes its place with new rugs of this type, providing the pile is good, the remodeling skilful, and the color suitable for the room in which it is to be used. Such a rug should have the edges so bound that the binding will not show when it comes from the dye pot.

A favorite old use for worn carpets was to ravel them out and use the yarn so obtained for making rugs. Since such yarns were spun expressly for floor covering manufacture, they were and are eminently suited to rugcraft. They have a quality that resists wear of boots and shoes. They can be used in the making of any yarn rugs. If the color is not right, the dye pot can change it. Such salvage of old carpet mediums remains excellent to-day. No hint of economy is visible, as the yarn is used exactly as if new.

Stocking Rugs

Because amateur rug makers have used the term so frequently, the inelegant name of stocking rug is fastening itself upon floor coverings made from old and new hosiery. It is not a name used by expert rug makers, although they recognize the medium as excellent. These rugs belong by right to the rag rug group, stockings being cut into strips and used exactly as rag strands. There is an excess of thriftiness needlessly proclaimed when they are called stocking rugs.

The reason why stockings, also Jersey cloth and other knit-woven textiles, are especially good for rugs is that, after the strands have been cut, they coil, making a twisted medium resembling rug yarn. The coils are coarse or fine according to the width of the strands. They will always curl over the right side, presenting the wrong as the outside. It is a mistake to attempt to reverse this natural order, for it is practically impossible; and, fortunately, for rugcraft the wrong side of the weave is as good, if not better.

In cutting stockings start the strand at the toe and cut in a circular spiral to the top. One continuous length will result. Allowance must be made for the differences of weight in the weave. Hence the strand should be cut wider where the stocking is sheer and narrower where it is heavy. Uniformity of size in the finished length is essential.

These strands can be employed in all rag rugwork, and

occasionally as yarn strands in other styles of rugs. For instance, a fine stocking strand can be used for embroidering on canvas when the mesh is four holes to the inch. In whatever way the medium is used in rugcraft, stocking rugs appeal to the thrifty because they provide a good use for old hosiery. So satisfactory is the medium, however, that rug makers often buy " seconds " in stockings, dyeing the white ones to suit any tones necessary to a color scheme. When it is possible to purchase this hosiery from a factory, the outlay is appreciably diminished.

Candlewick Rugs

The name candlewick rug has a quaint rather than a prosaic sound. Although the rugs can be made in any craft in which heavy yarn is ordinarily employed, and in most of those in which rags are the medium, the specific name should not be abandoned. The lightly twisted cord can always be obtained in white, as it is nothing more nor less than the cotton cord used for the wicks of candles. At the present time candlewick is in the forefront of fashion for embroidering spreads and many other articles, and it is available in many colors. Should others be needed, the medium dyes easily, being light to manage and absorbent. Any rug maker can dye her own supply if she so elects. If, in addition to doing this, she purchases the wick wholesale from a candle supply concern, the cost of the medium is diminished, as in the case of hosiery.

It is unnecessary to give details for making candlewick

rugs, as the maker can follow directions given elsewhere in any craft she selects. Needleweaving is one craft, however, that may be mentioned as lending itself especially well, since candlewick is a favorite medium for homecraft needlewoven rugs.

Clothesline Rugs

Clothesline rugs derive their name from the use of this rope as a filler over which to crochet a finer medium. Cotton clothesline is used. It may remain white or be dyed. When colored coarse string is the medium for crochet, extra strength is supplied. The rope should be clearly visible between interstices in the work as in warp and weft crochet in which a chain-stitch is taken between each plain crochet stitch. When clothesline is used as a filler for rag crochet rugs, the rope is concealed, acting merely as additional weight for the rag strands which should be cut rather narrow. Clothesline rugs can be decidedly attractive in appearance as well as strong. They are at home not only in kitchens, and back halls, but on porches, and in summer bungalows. For back halls braided clothesline makes very durable doormats.

Paper Rugs

Paper has been used in rugcraft, but more in an experimental than a practical way. The paper is made into a stout, soft cord. This is woven on a loom. A frame loom

is adequate. Or it may be braided as jute. Braided paper rugs are shellacked, giving them a high luster and added durability. Woven paper rugs are more suitable for table covers, or " borde carpetts," as they were called in olden times, than for " fflor carpetts." Paper has proved suited to so many purposes to which it appeared ill adapted at first, that it may eventually become an approved material for rugcraft, but if it is to meet with the favor of rug makers its price must be low.

Textile Silk Rugs

The most exquisite textile used in homecraft rug making, is silk, but for this very reason it is one of the least practical. It is too delicate to stand the strain of the hard usage, the textile being totally unlike the silken threads employed by Oriental rug makers in their famous silk rugs. It should be borne in mind in connection with these Eastern carpets, that they are always considered works of genuine art, to be used for special purposes, and never to be stepped upon except with unshod or slippered feet. Homecraft rugs are in a different category, pre-eminently practical albeit handsome. They must have durability under friction of hard-heeled shoes.

Notwithstanding its very evident drawbacks, silk has been employed by handicraft rug makers so often that silk rugs warrant a special classification. As table " carpetts " they deserve merit. For davenport mats and chair rugs they are equally good. For wall hangings they are in their

element. Many of the rugs illustrated elsewhere can serve delightfully as silken hangings either embroidered or wrought in other crafts. It is in the realm of floor coverings that silk rugs are under a disadvantage.

If a rug maker has a large amount of silk rags and finally decides to make a floor rug, she is wise to determine upon one with a pile either knit or crocheted. In these a certain latitude in the matter of wear is permissible, for even when the "rags" tear at the tips or wear down in occasional places, it does not spoil the rug completely. This is not so in hooked pile, where each loop, cut or uncut, is a stitchery unit in a precise pattern, more intricately developed than in the other two pile rugs given.

A silk rug, when braided, crocheted, woven, knit or hooked, may grace a table, couch or chair as a mat of beautiful texture. One such table rug in shades of green wrought in rows from light in the center to deep green on the edge is used in an old New England farm house transformed into a summer "guest house." It is the delight of visitors and the pride of the maker. The braid is approximately one-half inch wide. The rug is a yard long and oval in shape.

Rugs Treated with Pigments

In turning to rugs ornamented with paint, stain or dye, it will be found that the stenciled rug is chief among them. Grass rugs, old carpets, and lengths of matting can be given a new lease of life through good use of these

agents. The entire surface of a faded grass rug, or one of similar character, can be treated with a weak solution of stain or be given a dye bath, and then have the border retouched to its original brightness. It will emerge almost "as good as new." Or it may be that the border alone needs re-doing to bring its worn places into their pristine freshness. Lengths of plain straw matting can be bound at the ends and have borders stenciled or painted on them, and thereby be transformed into good porch or cottage mats.

Old carpets when given baths of weak stain or dye can continue to be good floor coverings, if faded colors alone are responsible for their poor appearance. While such treatment will not bring back the identical colors, it will tone and mellow the entire surface in a pleasing way. The original hue that prevails should not be radically changed, or failure will result. Therefore, if grey, blue, green, mulberry, tan, etc., is the general color effect, the bath should be whichever one the specific carpet calls for.

A rug or carpet must be thoroughly clean before giving it a bath in any of the agents. Mix enough solution for the entire treatment. Use a broad paint-brush and rub in the color well with it. Do not go over any surface more than once, lest an extra amount of color remain in that place and an uneven tone result. After once applying the color over the entire rug surface, it can be gone over again to deepen the whole tone, but the rug must be dry from one treatment before another is begun. If

a rug remains on the floor during the process, lay many thicknesses of newspaper beneath it. The paper not only protects the floor, but absorbs any superfluous moisture that may seep through during the process. This same precaution should be exercised when a border, only, is dyed or stained. The use of any of these agents for restoring or ornamenting a floor covering is distinctly a matter of economy, although the results may prove entirely satisfactory.

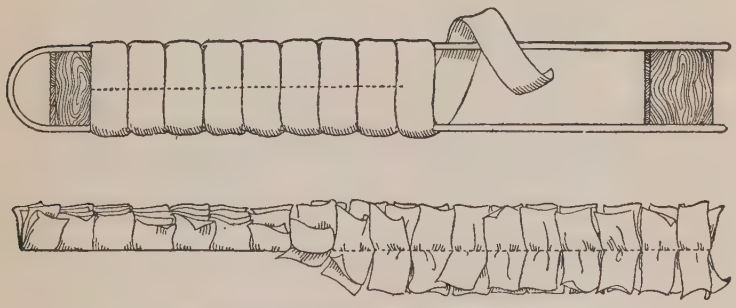
Thrifty Floor Coverings

Rugs that come under this classification are those in which beauty is of such small consideration that it is an incident, merely. Utility is paramount. Such charm as exists in the finished floor covering is entirely an accident. Design is utterly wanting. The hit-or-miss method is followed to its uttermost length. But, notwithstanding all these undesirable elements, the actual texture of the rug may be as comfortable to the feet, as when beauty is present. A bare floor, that would otherwise be hard and cold, can be covered, protection be gained and comfort furthered. When a home maker is spurred on by necessity, such floor coverings are well warranted.

One variety of these rugs is made of tidbits of cloth. The equipment is so simple that anyone can make it. It consists of a stout wire from sixteen to twenty-four inches long, bent at the center forming a huge hairpin with prongs either one inch or one and one-quarter inches

apart. These are kept parallel by two wooden wedges. One is put in close to the bend, and the other near the ends of the wire pin.

Rags, cut into strips to make a uniform size, are wound over the frame, commencing at the bent end, continuing to the open end. When the frame is so full it can hold no more, the top wedge is removed and the frame is put under the presser-foot of a sewing machine. The rags are



WORKING DIAGRAM FOR "HAIRPIN" MAT

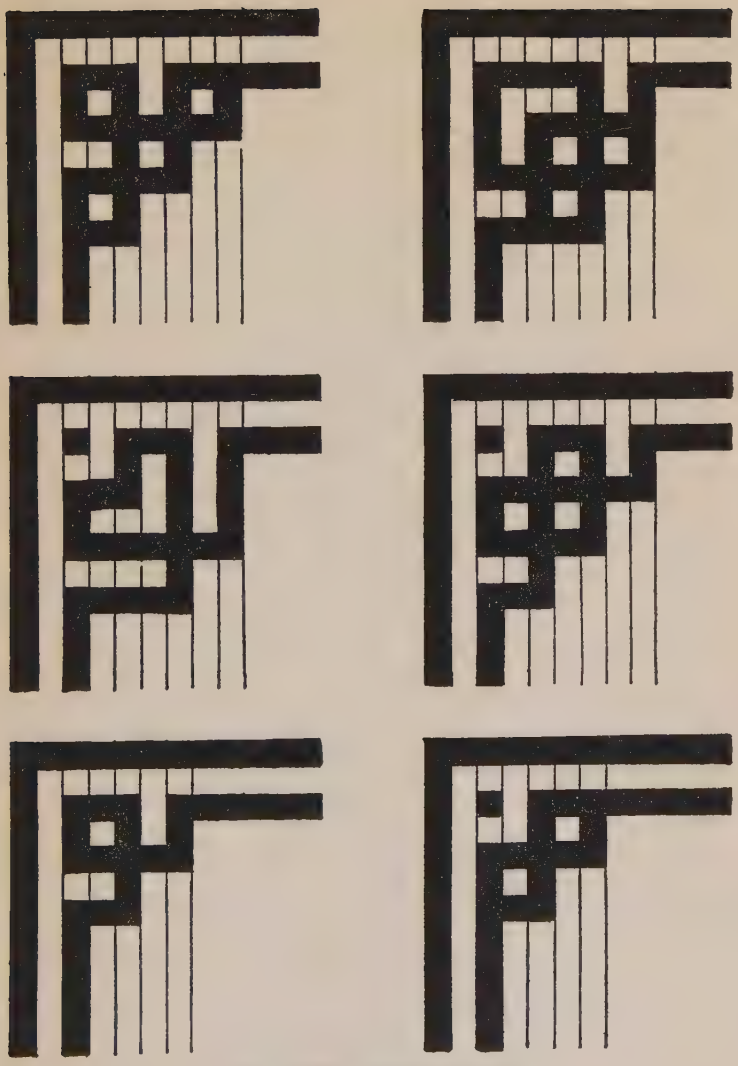
stitched down the center nearly to the lower wedge, which is then removed, for the stitching to continue. After removing the frame from the machine, the rags are cut along the line of turning over the wire. This releases them from the frame which is ready to be used again in the same way. When enough of these fringed strips are made to cover a foundation rug surface of sailcloth, denim, ticking, etc., the strips are stitched in close rows to it. The upstanding tips of cloth form a durable pile surface for the floor covering. If a busy home maker

cuts and winds the rags whenever she finds cloth that can be so utilized, without waiting for an accumulation of pieces, and stitches them as soon as the frame is full, the rug making progresses rapidly. A rug of this sort by a bedside is welcome to step upon, especially if the rags are woolen.

The cartwheel mat is an old-time thrift floor covering. Its name comes from the implement of its construction, for it actually was the cast-off tire of the family carriage or farm wagon that was used for the rug frame and over and about which the rag strands were wound, like the spokes of a wheel. These strands formed the warp, about which other rag strands were interwoven as weft. The weaving began as near the center, or " hub," as the closely overlapping spoke strands permitted, and was continued with regularity over and under each " spoke " until the rim was reached.

The rug was released from its frame by cutting the " spokes," which were then turned over the weft and sewed firmly in position. When extra warp was needed to insure a close, even weave, other strands were introduced, midway between each two spokes. Without doubt, these mats are responsible for the name Cartwheel Rugs now given many types of round rugs. This same style of mat is made to-day over round frames which may be iron cartwheel tires, children's wooden hoops, or extra-heavy wire, bent to form a circle.

Tiny bits of cloth can be made into rag tufts and sewed to a foundation in primitive fashion, and another style of



SIX CLASSIC CORNER MOTIFS

These corners, developed in plain knitting, are also suited to rugs of other crafts

pile rug results. Cut the pieces circular. A half dollar, a large spool end, or a big button makes an excellent pattern for units. When these rugs are constructed regardless of pattern or color combinations, they come under the classification of thrift rugs. They can be made, however, so that beauty is not a mere incident. They are no less cheap, and the artistry instilled puts them into the group of fabric pile rugs described in Chapter XVI.

When ravelings from old carpets or from garments are knit, crocheted, or otherwise made into floor coverings in hit-or-miss fashion, they, too, come under rugs of minor significance, for they are thrifty in the extreme. Beauty is but incidental. These same agents can be used with skill, however, to produce some of the choicest of homecraft rugs. It is the artistry displayed that is the criterion of excellence. It is indeed true that mediums may be of no intrinsic value, but, if properly employed, like pigments in the hands of a master painter, they become agents of beauty in the hands of the homecraft rug maker.

Part VI

CARE, REPAIR AND SALE OF HOMECRAFT RUGS

XXIII

THE CARE OF RUGS, THEIR REPAIR AND RECONSTRUCTION

The life of a rug is as dependent upon its care and repair as upon the fine quality of its materials and the excellence of its craftsmanship. Processes vary to suit different constructions. When only part of a rug is good, it is possible to salvage that for further usefulness. When the damage to a rug is local, mending can be successful, provided the worker knows the technique of the craft.

Repairs should be as invisible as the type of the rug and its stitchery permit. Inserted textiles should match those first used. Colors in them and in working mediums should duplicate those existing in the floor covering at the time the repairs are made. New work should blend with old as if it were part of the original.

To insure new tones being identical with those in the rug it may be necessary to fade, tone, or dye materials, even though they are left-overs from those used in the making of the rug. Materials are faded quickest by wringing from clear water and exposing to strong sunlight, repeating the process until the color is satisfactory.

The mellowing effect of time on textiles can sometimes be gained by baths in weak tea or coffee. Occasionally the dye pot may have to be resorted to. As modern com-

mercial dyes are excellent and easy to use, rug makers of to-day are spared the tedium of making their own. This elimination simplifies rug making. At one time the gathering of roots, bark, leaves, herbs, etc., the brewing and further preparation of them, was a task in itself. It was essential then, but is unnecessary now. Science provides such satisfactory dye stuffs that they are universally employed in the Occident.

Repairing rugs of superimposed classic stitchery, while not so difficult that it is beyond the powers of the homecraft rug maker to do, is, nevertheless, a fine art of mending. It requires precision and accuracy in each detail. Those who have charge of canvas needlepoint tapestries in museums dexterously repair the ravages of time, matching materials and mediums as closely as modern can duplicate old, and employing identical stitchery. The mending, whether done by an expert or an amateur, is one to command the best skill of the worker.

The first step in such repairing is to cut from similar foundation textile, a square or rectangular piece considerably larger than the rent. Position and baste this beneath the torn or badly worn place. If the mending is to be done on counted threads, the weave must match thread with thread, and mesh with mesh. Otherwise the new stitches will be askew.

Turn the rug right side up. Cut away frayed edges and badly worn portions straight with the foundation weave. Overcast the old textile to the new with the precision described. It is to be expected that the portion of the rug

about the hole will be tender. To strengthen it, and also to secure the patch adequately to the rug, embroider over three or possibly four rows of the double thickness, stitchery and all. The yarn will probably be so worn that it will act as a slight padding merely.

The new embroidery medium must match the old in tone and in kind, and carry out the fragment of design that is missing. This stitchery will entirely conceal the patch on the right side. On the wrong side, cut away the superfluous patching textile, and fell down what is left, close to the newly inserted embroidery stitches. The patch will be as invisible as fine mending can make it. Since the embroidery is done through overlapping foundations the patch will be firm.

The patch should be pressed by covering with a damp cloth laid over the wrong side, and ironing with a fairly hot iron. It is advisable to press the entire rug in like manner at the same time.

If the section of the design to be duplicated does not appear in any other part of the rug, it is important before any repairing whatsoever is done, to take off on draughting paper as clear a pattern as the worn stitchery permits. The work is not difficult, as it progresses in well defined rows as in cross stitch. When the design has been designated on the paper, colors can be painted in. Whatever the type of rug worked by counted stitches, this method should be followed.

Hooked rugs are similarly repaired although the lack of precision in the stitchery permits far more latitude.

Designs are seldom taken off. The patch is positioned according to the weave. This is all that is necessary. Threads do not have to match exactly. The portion of the pattern to be replaced is hooked in as accurately as the skill of the rug maker permits. In rare occasions, when there is a large hole, outlines of design are sketched on the patch with charcoal or a soft pencil. Unless the rent is very bad, the rug does not have to be put back into the frame when it is mended.

Before starting to hook, all frayed portions of the old rug about the rent should be cut away, and edges of old foundation felled to the patch. It is often wise to rip out some rows of stitches about the hole and set the new stitchery through both layers of the foundation, affixing them firmly and invisibly together. This allows for a neater finish on the wrong side.

As soon as the edge of a rug begins to show signs of wear it should be strengthened by binding with braid, or tape of diagonal weave. Fell the binding down neatly. When but one row of hooking is frayed, it can be ripped out, the foundation turned back to the second row, and the edge freshly bound.

Hooked rugs that have badly torn borders can have them replaced with new. Baste one side of a strip of burlap to the firm underside of the foundation. Both edges of the burlap should be overcast. The strip should be several inches wide, so that it will extend at least two inches beyond the rug edge when positioned. Join strips together by overlapping one inch and tack with coarse

stitches. This method of positioning strips is used when rugs are square or rectangular.

If rugs are round or oval, position each strip separately, so that the new textile will match the direction of the weave in the rug foundation. Strips may need to be cut wider than for the other shaped rugs and they should be shorter. When positioned, edges, not ends, will overlap. The applied textile will present a curious appearance suggestive of steps along the edge. After the hooking is completed, these jagged parts are cut off, leaving the edge conforming to the contour of the rug. It is then turned back and bound. Although it might seem easier to set a bias strip about a round rug, this should never be done. It will either cup or ripple, while the straight one will not.

Fabric mosaic (button) rugs and petal (scalloped) mats present no difficulties in repairing. Foundations are patched with materials to match. New units, cut like the old and of corresponding color, are sewed to them. The lining where ripped is sewed in place, or the entire rug is relined if needed.

A rug with foundation partly exposed should be so patched that the lines where old and new textiles join are well concealed. In a quilted rug, the seaming should come on the line of indented stitchery, which will hide it. In patchwork rugs the ornamental appliqué can be ripped, and then felled down again over the portion of the patch inserted beneath. Where this method of concealment cannot be carried out, stitches of embroidery can be worked over seams, provided the worker has cut the shape of the

patch with this purpose in mind. This is assuming that embroidery is combined with appliqué, as so often happens, or that it can be introduced not only where needed, but in occasional other places, making it seem to be part of the original plan of design.

Embroidered rugs can have decorative stitchery conceal seams as if ornament merely were its reason. A rent can be so deftly mended thus, when old and new materials match perfectly in kind and color, that it is practically invisible. Frayed embroidery can be picked out and done again in new medium, or worked over as if it were padding. Broken threads of quilting stitchery should be ended off securely and new run in where old is missing, so that the design is preserved.

A braided rug frayed at the edge can have one row ripped off and not replaced, or a new one can be substituted. Dilapidated braid in the field of a rug can be ripped and cut out, new strands sewed to remaining stout strands, the braiding continued to fill the vacant space, and the new length be sewed in place. This mending must be completed row by row to be imperceptible.

In needlewoven rugs should a single strand of weft give way, sew the disconnected ends to adjoining weft and spread the weave enough to fill any empty space. New weft can be woven in to fill a rent left threadbare. If the warp breaks, the homecraft rug maker must be a skilful worker to mend it correctly. It may be necessary to call in an expert. New warp will be required. This must be tied to the old where it is strong, and be pulled as taut as

the other warp. Then new weft must be interlaced to fill the space. If side edges need repairing they can be strengthened by working over with buttonhole-stitch, using colors to match the worked over weft. Worn ends of rugs can be bound or commercial rug fringe replace the original. There is a double heading to such fringe, between the layers of which the rug is slipped and sewed.

Knit rugs, since they are made in strips or sections seamed together, are easily repaired by the simple process of knitting and inserting new portions to replace those worn out. If part of a section only needs replacing, slip the loops of stitches in the nearest strong row, onto a knitting needle, and knit a length of new medium matching the old. Bind off the stitches when a sufficient length to fill the space is done. Graft this edge to the one it is made to fit, or seam the two edges together if one is not familiar with the process of grafting.

Rents in crocheted rugs can be mended row by row. Join the new medium to the old where it is strong, and crochet to complete the part of the row to be filled in. Fasten off all ends securely. Complete each row thus, working back and forth or from right to left, only, according to the stitchery in the rug. When made in sections, a crocheted rug is easily repaired by replacing old parts with new. Edges can be renewed by raveling frayed stitchery and crocheting fresh.

Rugs ornamented with pigments can be retouched with whatever coloring agent was used originally. If the foundation is "as good as new," an entirely different

color scheme can be carried out as successfully as at first, provided darker tones are used.

In turning to the subject of cleaning as an essential part of the care of rugs, two processes are found, one mechanical, the other hand work. Each has its adherents. Mechanical vacuum cleaners simplify the task. By them, moths are eliminated as well as dirt. Too constant use of high pressure machines should be guarded against and a careful choice of correct attachments be made to accord with the type of rug being processed. Otherwise the cleaning may wear stitchery, though such risks are reputed to have been eliminated by improved mechanism. Rugs wiped off with a damp cloth after cleaning have their color freshened. After a rug is well cleaned, by whatever process, it can be kept clean for a long time by going over it daily with a damp cloth.

Smooth-face rugs, hand cleansed, should be laid on the grass, and be beaten, first on the wrong and then on the right side, using a flexible woven rug beater. If the rug is of a coarse type such as a carpet rug, it can then be swept with a regular corn broom. If it is one of choice work, it can be swept on the wrong side, with a broom. On the right it should be brushed with a clothes-brush having fairly stiff bristles, and then be wiped off with a damp cloth. For these last two treatments a rug can be laid on a table covered with newspapers. This prevents the worker having to bend far over.

There are certain types of rugs that should never be swept with a corn broom. They should be beaten, but not

too vigorously, and then gone over with a clothes-brush (not a whisk), and wiped with a damp cloth afterwards. The quilted rug and fine, embroidered rugs belong to this class. A flexible whisk is advised for the right side of mosaic and petal rugs and those having applied or slightly embossed surfaces.

Rugs with a pile should be beaten, swept, and wiped off as described. Like the better sort of smooth-face rugs, fine pile should be brushed on the right side with a flexible whisk or a clothes-brush. Suit the utensil to the character of the work in the specific floor covering. Always sweep or brush a pile rug either with the nap or across it, never against the nap. Brushing with the nap heightens the sheen and assists felting. Cleansing a rug against the nap impairs the sheen and separates filaments. It opens the way for dust to settle on foundations instead of forming a barrier against it, as when the nap is correctly smoothed. When wiping off rugs of all types add a very little alcohol or a few drops of household ammonia to the clear lukewarm water, and the surface will not only be free from all traces of dust, but colors will be heightened also.

When colors are known to be fast, and textiles are suitable, rugs can be washed. In olden times all cloth that was used in rag rugs was first washed, and that likely to run was soaked until no more color would come out. This treatment is recommended to-day when cloth is from discarded garments, or when colors need to be "set." In modern rag rugs employing new textiles, such laundering

is generally omitted. The finish of new goods helps to keep them clean. Dyes are more reliable. For laundry purposes a lukewarm solution of soap bark and water is an old "stand-by." To-day there are numerous excellent cleaning agents.

An ordinary scrubbing-brush with flexible bristles can be used on most rug surfaces, or a hand manipulated suction or vacuum washer. The vigor of the treatment should be regulated to suit the textile and type of rug. After thorough rinsing, lay rugs flat on the grass, or on boards or cement either out doors or in. It is customary to dry Oriental rugs in strong sunlight, after a hose has been played on them as a rinsing process. Water is expunged by pressing with a round wooden roller run over the surface following the direction of the nap. This method is recommended for washable homecraft rugs which have been rinsed in several waters. A portière pole or a large rolling-pin can supply the tool. Never wring a rug. The twisting and creasing is ruinous.

Rugs should never be hung on a line to dry after washing, or when they are cleaned by any process, or even aired. The strain on the stitchery, especially that close to the line, is tremendous in heavy rugs, and too great in any floor covering. It separates rows of weft or warp, according to the way they are hung, lengthwise or sideways. Stitches are loosened or made irregular. To beat a rug on a line exaggerates these troubles.

Shaking rugs is invariably harmful. It makes threads snap. It strains both warp and weft. It loosens stitches,

especially those held together by pressure merely, as in hooked rugs. It weakens binding and frays fringe. No floor covering can long withstand such drastic treatment.

It has been found so injurious to Oriental rugs to shake them and hang them on lines that, according to G. Griffen Lewis, more of these splendid floor coverings are worn out by such mistreatment than by actual usage. Foundations break, knots loosen, untie, and eventually threads come out. This causes a blemish in itself, and also weakens all the surrounding textile. Homecraft rugs, many of which are exquisite creations, deserve to be spared such a fate.

The Oriental method of straightening rugs is excellent for all handmade floor coverings discovered to be crooked when completed. Tack the rug to a floor, pulling it straight as the tacks are put in. The line in the flooring where the boards join will supply a gage along both sides. Ends must be at perfect right angles to them. Wet the rug thoroughly and allow it to dry before releasing from its position, whence it will emerge straight and even.

Rug corners that have a tendency to curl can be kept flat by either one of two methods. A narrow strip of lead, one-eighth inch thick and two or three inches long, encased in cloth, may be sewed close to the lengthwise edge at the corner of the rug on the under side. Or triangles of rubber may be basted or otherwise secured to the underside of the rug corners. One rubber stair-pad will supply four such triangular corner sections.

The wear on rugs laid directly on hard wood floors has

been proven so destructive that there is a growing tendency to use rug linings. All power-loom carpets, properly laid, are so protected, but until comparatively recently no such precautions were taken to spare handmade rugs, however handsome. The growth of appreciation and value of the latter in the Occident is responsible for the present better care.

Felt and rubber are excellent for linings. They can be bought in rug sizes or cut to order. Their tenacious quality helps to keep rugs from sliding on polished floors as well as softening the tread and preserving the rugs. Lining paper, like felt and rubber, has good resilience, but it lacks tenacity. It should be used under carpet-size rugs only, not scatter rugs. No lining should be so bulky that it perceptibly raises a rug from the floor.

In the Orient, where the care of rugs as well as the making of them is understood thoroughly, entire floors are not infrequently covered with very heavy felt. This serves as a soft and neutral background enhancing the beauty of rugs and preserving the textiles. In the Occident, carpets are sometimes so used. Their vogue for this purpose is steadily increasing. It need scarcely be mentioned that rugs should never be placed on figured carpets. The conflict of patterns is confusing. Carpets, in flat neutral tones, especially those having a deep pile, make appropriate backgrounds, artistic and luxuriously soft. Fine rugs will last generations when they are given the care recommended.

But even when they pass beyond use in their original

form, their day may not be over entirely. Should the rug be too tender throughout to endure the hard wear it would get on a floor, it can be converted into a "table rug" or "table carpett," as such covers were called in olden times. Some types of rugs make attractive wall hangings — another ancient use.

The good portions of otherwise worn-out rugs can be salvaged by cutting them out and putting them to use as centers for braided, crocheted, knit, or hooked rugs, etc. The reconstruction of floor coverings in this manner depends for its success upon the correct combination of two congenial crafts, or the skilful introduction of an inset piece into a "surround" of like craft.

Pieces from rugs can be bound and used for chair seats and foot mats, or as covers for sofa pillows, footstools or floor cushions. Before the time comes, however, when rugs are so badly worn that such salvaging must be resorted to, every effort should be made to keep them intact as floor coverings.

XXIV

BUSINESS ASPECTS OF RUG MAKING

The rug maker who wishes to sell the floor coverings she makes can find a market for them if she goes about it in a businesslike way. She can sell her rugs outright to a store or department handling carpets, getting a wholesale price from the buyers, or through a store, gift shop, or exchange, on a commission basis. She can also sell direct to a clientèle of her own. In the latter case she can use some room in her home for display purposes, or have her own shop, disposing of the rugs in connection with other varieties of handicraft, antiques, or gifts.

It is also possible to build up a mail order business by sending out form letters to a selected mailing list, or by advertising through papers and periodicals whose readers are known to be interested in handicraft in connection with interior decoration. Selling rugs in this way requires photographs of rugs or drawings of designs, to be sent on request to prospective purchasers. The colors to be used in carrying out patterns may be left to the patron to determine, or they may be suggested by the rug maker. In presenting patterns, those carried out in wash drawings are most attractive, even though the colors finally decided upon for the rugs are quite different.

It frequently happens that the interest of some interior decorator is gained after examining samples of a rug

maker's work, and he or she will take orders from clients and hand the orders over to the rug maker to execute on a commission basis. Special order work is the most desirable of any.

A rug maker who is also a designer and acquainted with the distribution of colors to secure proper balance in carpets, can turn this knowledge to advantage by giving lessons in rugcraft. She should be able to retail equipments and materials bought at wholesale, thereby adding to her profits by thus being " in the trade." A teacher must be a thorough technician, either in some special craft or in many. She must be able to impart her knowledge and to correct mistakes easily in a beginner's work. A rug maker, particularly one familiar with many crafts, is often in demand for occupational therapy, in which work rugcraft holds a high place, ranking among the very first in importance.

It may be mentioned, in this connection, that the value of rug making cannot always be estimated in dollars and cents. Its restorative worth to the worker has been found incalculable. Men and women whose vocations keep their brains under constant mental pressure find the avocation of rugcraft a relief and a pleasure. It is absorbing without being exhausting. The stimulant it offers brings into play manual energy and artistic ability. Such men as bank presidents in metropolitan cities have taken up rug making as a hobby, finding in it an invigorating diversion with recuperative results.

The rug maker who would gain monetary success

through her craftsmanship must have something distinctive to offer. This may consist in superiority of technique in conjunction with fine designs and pleasing color arrangements. Or it may come through individuality in designs of her own invention wrought with due consideration to color and its proper balance. Or it may come through charm of color combinations creating anew the beauty of classic old designs. Or it may come through some novel assembling of types of work or different crafts that she discovers can be united artistically. Or, still again, it may be through advance showings of ancient rugcrafts in revival.

It is essential that rugs offered for sale be fine examples of some incoming style, rugs that are on the crest of a wave of popularity, or conservative examples of staple types. Craftsmanship must be above the mediocre. When once a good connection has been established for disposing of one's output, the store, shop, or exchange will, upon request, advise the rug maker of types of design and possibly of color schemes that especially appeal to its clientèle.

The rug maker who wishes to confine her business to the sale of only those rugs that she herself makes has the four avenues of outlet already named. If she sells to personal friends and acquaintances, they will be sporadic customers, and should not be considered as more. There are rug makers who are kept constantly busy selling their floor coverings in the several ways given, and who make neat little sums thereby. As in other enterprises, success

comes through persistent effort coupled with the knowledge that articles have actual merit.

Some rug makers have no desire to be anything but fine craftsmen. They prefer to work on a wage-earning plan under the direction of some society or community enterprise. They receive a steady rate, generally calculated as so much per hour, though it may be a flat rate of so much for a rug. Or again the calculations may be at the rate of some set price per square foot.

When a number of women in a community wish to turn their rug making abilities into profitable channels, they can cooperate and arrange for a sale at the home of some one of the group. For this sale each person makes several rugs to be sold outright or from which orders are taken, to be developed according to the customer's preferences as to colors and mediums. A combination of both these methods is recommended, whereby rugs, though sold, are not delivered until the end of the sale, thus making it possible for orders to be taken from the rugs rather than from designs.

At stated times sales of this sort should be held. They prosper business by keeping alive the interest awakened, as well as furthering orders. Each person making a sale should note the address of the purchaser in order to send announcements of following sales. It is advisable to have a register conspicuously placed, on a table with pen and ink at hand, and a card plainly lettered suspended above. This states that all those whose names and addresses are

written down will receive information of forthcoming sales and any special rug news.

Between sales rug makers fill orders, and make a fresh supply of rugs for future sales. The latter floor coverings should be in new designs, and even in different crafts if workers have sufficient versatility. Except for periods when sales are carried on, this business does not take women from their homes — an aspect which, to some rug makers, is a matter of importance.

A rug shop is a natural outgrowth of such a community undertaking. It reverts to the benefit of all workers. A clientèle will have been established, and the necessary avenues of supply assured. Each worker contributes toward running expenses, or one of the group may decide, on her own initiative, to start a shop. In the first instance there must be a person in charge, who gets a salary, paid by contributors as part of their overhead expenses. Each rug maker receives the full amount of the sale price for her floor covering. It is from this that she pays her proportion of costs. Risks are divided.

In the second instance, no one is at any expense except the person running the shop, who takes all risks. It is her prerogative to make a selection of rugs for display purposes or for stock in trade, and to determine the commission rate. Thirty-three and a third percent is not uncommon in cities where rents and overhead are high. A fair average is twenty-five percent for specialty shops. Most regular stores ask but twenty percent for handling. Some ask but ten, but these are run chiefly for the benefit of

consignors without profit to the concern being expected. The consignor must take into consideration the deduction of whatever commission is stated, and ask such a selling price as will permit an adequate sum to come to her afterwards.

The rug maker who establishes even a small business soon learns the sort of rugs she should carry. It is important to have good rooms in which to show them and an attractive sign to lure the passer-by to come in and examine the stock. Ingenuity is exhibited in many such signs, and artistry also. The woman who is starting out in the business often attracts attention to her rugs by hanging some over a porch-rail, above which is a sign announcing "Rugs for Sale." When the house is on a main road in the country or in some village, and motorists are constantly passing it, such a sign, though costing practically nothing is often sufficient invitation. The rugs should be specially chosen to attract the eye as well as indicate good taste.

If the person running the shop really knows rugs, she can interest those who come in by telling them about designs, types of rugs and their suitability to definite rooms in a home, or certain styles of decoration. She can attract attention to fineness in stitchery, and peculiarities of work, and thus hold attention and inspire confidence. Knowledge, or its lack, is soon perceived by purchasers, and if a connoisseur or rug collector comes, consternation ensues or delight according to the personnel of the shop.

A rug maker, even though not connected with a shop

should have a knowledge of the worth of her floor coverings. She cannot otherwise set correct selling prices on them. Fortunately there are ways of gaining the desired information, thereby avoiding two common pitfalls: one, an exaggerated valuation of her own handicraft which results in exorbitant prices; the other, under-valuation, which suggests the work is not up to standard, and cannot command a sum commensurate with that of fine rug-craft.

One avenue of gaining information without outlay is the pricing of rugs of similar character and quality that are on sale at the time. Note the fineness of stitchery and quality of mediums and materials. These are important factors, and must be given due consideration. It is not enough that rugs are of like size and in identical craft. These are but two of the many points influencing values.

Stitchery and finish must come up to a high standard. The chairman of the board passing on all work sent for admission to one of the notable handicraft societies of America told me that, from his experience, more rugs were refused acceptance because of badly finished edges than for any other one special defect. This indicates the care with which work is gone over by craft societies and examined by buyers for stores.

One other instance of such care may be cited. An expert craftsman specializing in woven rugs told me that the first rugs she tried to sell were all returned to her because the grade of warp was poor. The firm that sold the warp, when informed of the matter, looked well into

their end of it, and discovered the fault lay with them. They re-warped her loom gratis, doing all they could to make amends. She of course lost heavily, notwithstanding, but she learned about warps from this experience.

These illustrations are illuminating and should act as helpful warnings to any rug maker who is inclined to slight any item whatsoever in her work. Thereby the rugs may be unsalable.

It must also be borne in mind that age, in itself, influences prices. An old rug will bring more than a modern one, even though in all other respects the latter is equal to, and sometimes better than, the antique. The modern rug sells on its intrinsic merits alone. The antique sells on this plus an arbitrary sum estimated by years. The rug maker must reckon with this, not with any discouragement, but knowing it to be a factor regulating values. Therefore, in pricing rugs with the view of appraising her own, she must use modern rugs as the criterion. This situation of relative values of antique and modern pieces pertains throughout household furnishings, such as furniture, glass, silver, etc., as well as floor coverings that are handmade. Craftsmen in all lines have to contend with this factor. The rug maker is no exception.

The sum set upon completed rugs shown in embroidery shops where rug equipments and materials only are for sale, and not floor coverings as such, cannot be considered as criterions of price. The rugs are not exhibited to attract sales for them, but as illustrative examples of stitch-

ery, color combinations, etc., that result from making rugs with the outfits that are there procurable.

When a homecraft rug maker has " studied the market " in the ways described, giving careful thought to each factor, she will have a very good idea of the value of her own work. Experience in disposing of her rugs will add to her knowledge.

Another method of ascertaining valuations of rugs is to have them appraised by an authorized appraiser well acquainted with rugs, and whose business it is to know values. A good way to get in touch with such a person is to inquire at some rug store of high standing. There may be in its employ an appraiser who can evaluate other types of handmade rugs besides Oriental carpets. If not, the address of such an individual should be obtainable.

A handicraft shop that sells rugs supplies another means of getting work appraised. Some remuneration should be offered for such expert advice.

It is enlightening to realize that all the ways described for profitable ventures have been successfully used at one time or another. Some require capital, others none apart from equipments and materials.

The idea of community centers for rug making has been tried out in many instances, with more or less success, as already instanced in the Abnakee and Sabatos rug enterprises. A third notable one was organized and promoted by Mrs. Candace Wheeler. To-day there are scattered over America many communities of rug makers working un-

der the leadership of some expert or the direction of societies for the promotion of needlecraft.

Some of these centers are in the Southern mountains, where, among other types, shuck mats are featured. Centers in Canada and New England are apt to feature hooked rugs. In England, needlecraft societies of royal patronage are making faithful reproductions of ancient needlepoint carpets. The reappearance of "Turky Worke Carpetts" and other canvas embroidered floor coverings in America and England shows a distinct trend toward the finest types. In all these crafts and enterprises rug makers are earning money.

DIRECTIONS FOR MAKING

WINDOW BOX RUG
RUG CORNERS IN SCROLL PATTERN
SHIP RUG "CONSTITUTION"
"CAVE CANEM" RUG
"CLOISONNÉ" PETAL RUG

DIRECTIONS

Window Box Rug in Plain Knitting

(Chapter VI)

Stitch: Plain "garter stitch."

Medium and Needles: Extra-heavy rug yarn, or strands of textile. A heavy outing-flannel cut into one-half inch strands is recommended and Number 6 bone needles.

Window boxes are knit in 3 short, wide strips; not each in one long narrow strip, which would give a wrong direction to the stitchery which throughout the rug must be consistent.

End boxes should start and finish with a lighter color than that used for the main part of the box, and this light color should inclose one end. The central box differs in that each side is inclosed with the lighter color. It is a simple matter to drop one color and take up another, but if the rug maker prefers she can make the lighter posts in separate strips.

Knit window panes in 5 strips: 3 narrow dark ones for sash pieces and 2 wide ones of light and dark to indicate panes and sashes as illustrated.

Knit shutters in alternative rows of dark and light color to represent slats or *louvres,* following rug pictured. Knit narrow strips in color of window boxes and use as side borders when seaming rug units together.

Wedge circles forming flowers are knit as follows:

Cast on 9 sts.

1st row: Knit 8 sts, omit final st, leaving it on first needle throughout entire work. Turn.

2nd row: Slip first st on second needle to first needle. Place a bit of colored yarn across the work as a marker. Knit to end of row (7 sts). Turn.

3rd row: Knit first st of lighter shade by drawing a strand of the new medium through for the first loop stitch. Knit all but the final stitch (6 sts in all). When knitting toward the hub the final stitch in the row is always left unknit. Turn. Continue this color to finish of wedge.

4th row: Slip first st, insert marker, knit to end of row (5 sts)

5th row: Same as *3rd* (4 sts)

6th row: Same as *4th* (3 sts)

7th row: Same as *3rd* (2 sts)

8th row: Same as *2nd* (1 st)

One wedge is now completed. With the dark color, start a new one and make each wedge a repeat of the directions above. When 12 wedges have been so made, bind off the knitting and seam edges together to form an uninterrupted circle. Loose ends of the medium should be interlaced through stitchery on wrong side of the circle. All flowers may be in the same color or no two need be alike, but each must be in two shades to give the petal formation.

Foliage consists of segments of circles in one tone of green, or two, slightly differing. Sharp contrast should be avoided, for these "leaves" should be foils for the petaled flowers, and not conspicuous units. Two wedges are sufficient to occupy each space. A clear idea of how these wedges fit and conform to the circular outlines of the flowers is found in Plate XI.

When all units have been knit, they are sewed together following the arrangement of the rug pictured. The units should be made to scale according to proportions pictured. The size of the rug is dependent upon the size of strands of medium, the needles, and the stitch tension. For example, each flower made according to directions given, with a good quality of outing-flannel cut into ½-inch strands, knit with a medium tension on number 6 bone needles, measures 6 inches in diameter.

The fringe can be made in any of several ways. A foreign method employs seven strands or more according to size of yarn, in lengths twice that of the finished fringe. Each group is drawn

half-way through a space between stitches at the end of a rug. The tips of strands are held firmly and evenly together and twisted very tight. Then a knot is tied in them near the end of the twist, and they are released to form a loosely coiled knotted fringe. Another style of fringe is made by drawing a central loop of the strands through spaces between stitches and tightly pulling the ends through the loop. Still another style of fringe is made precisely like ravel knit pile. The two edges of a 5-inch strip of knitting folded lengthwise are sewed with close tight stitches to the end of a rug. The middle of the fold is cut, releasing the strands, which unravel to form a fringe, slightly crimped at first. The fringe is made wider or narrower according to the width of the knitted strip.

Six Rug Corners in Scroll Pattern

Especially Designed for Knit Rugs

(Chapter VI)

Each corner represents as many widths of knitting as the vertical lines indicate, i.e., nine in the first four patterns and seven in the others. To insure correct proportions, calculate the width of a strip as one side of a square, knit as many squares or combinations of squares as the pattern requires, and extend the vertical lines to meet similar corners knit in reverse order at the ends of the strips.

To increase the width of the rug, knit strips with the double border rows to fill in the distance desired between corner sections.

Strip 1 is knit entirely of black or some dark color.

Strip 2 is knit with 1 square in border color and the rest in a lighter contrasting color, except at opposite end of strip, which is finished with a square of the outer border tone.

Strip 3 (Pattern # 1) consists of 1 square the width of the strip in the outside color, 1 square of lighter color, 3 squares of

dark, 1 light, then dark to meet reverse of pattern at end of rug strip.

Strip 4 (Pattern # 1): 1 square outside color, 1 lighter, 1 dark, 1 light, 1 dark, 1 light, 1 dark, 1 light, 1 dark, light to meet reverse border.

Strip 5: 1 border color, 1 light, 7 dark, light to meet reverse border.

Strip 6 (Pattern # 1): 1 outside color, 3 light, 1 dark, 1 light, 1 dark, light to meet reverse border.

Strip 7 (Pattern # 1): 1 outside color, 1 light, 5 dark, light to meet reverse border.

Strip 8 (Pattern # 1): 1 outside color, 1 light, 1 dark, 1 light, 1 dark, light to meet reverse border.

Strip 9 (Pattern # 1): 1 border color, 1 light, 3 dark, light to meet reverse border.

Strip 10, and each strip in every pattern *after the corner motifs are completed:* 1 square in border color, 1 light, 1 dark, light to meet reverse border. These strips form the field strips with borders and must be estimated to fill in the width between corner motif strips. But few are required or the rug will be too wide, unless the rug is extra long; for, estimating each strip as 2 inches wide, to completion of border the nine strips will equal 18 inches. The repeat (in reverse order of strips, 9, 8, 7, etc.) adds another 18 inches, making a total of 3 feet.

There should be at least 4 strips termed field strips, or one of equivalent width, which increases the width 8 inches, making a total of 44 inches, or 3 feet 8 inches. A rug of this width should be not less than 56 inches long, or 4 feet 10 inches; 60 inches or 5 feet is preferable.

A smaller rug can be made by using the sixth pattern, which takes but seven strips for the corner scroll development. To make a smaller rug in any of the other five patterns, the size of square may be decreased to 1 inch or 1¼, 1½ or 1¾ inches. To simplify getting good proportions in a rug, estimate the length as approximatey ⅓ more than the width.

Each corner pattern can be faithfully developed by following the same method of calculation carried out in detail in the first pattern. Each lengthened portion of the design in a strip is a multiple of the square determined by the width of the strip, thus resolving the copying of the design into as simple a matter as following a filet or cross-stitch pattern.

Ship Rug "Constitution" in Tapestry Crochet

(Chapter VII)

Size: 6 ft. 4 in. x 4 ft. 6 in., with strands 1 inch wide made of textiles the weight of chambray and which work out 2 stitches to the inch. Outing-flannel was used by the writer in the section shown in Plate II. The finest quality is most suitable and also the cheapest, for ½ inch strands equal 1 inch in poorer quality. A medium quality requires ¾ inch strands to be equivalent in size. So closely woven is the best grade that it resembles felt in texture, and it has the same non-fraying quality. One strip of medium 1 yard long makes 7 stitches of medium tension. All allowances are made for loose ends when joining.

The size will be 4 ft. 3 in. x 3 ft. when the rug is made of rug yarn, or strands ¾ inch wide of chambray weight which work 3 stitches to the inch. As the number of stitches is precisely the same, one rug takes no longer to crochet than the other. Work is very rapid.

Mediums: New cloth, rags, or stockings, cut into strips; also rug yarns.

Stitch: Russian stitch (described on page 119), a plain stitch used for tapestry (Oriental) crochet. The loop of medium drawn through the stitch at the beginning of a preceding row is counted as one stitch in the chain of 2 stitches with which each row is started. The loop should be taken each time through the second stitch of the chain, and the first Russian stitch in each row should

be taken under both loops of the first stitch in the preceding row. As the work progresses always from right to left, the pull of the stitchery is toward the right. To maintain even rows, each stitch at its completion should be given a slight pull toward the left. This trick of stitchery is as easy to acquire as it is essential. At the end of each row, draw the cut end of medium through the loop left on the needle. The loose ends should be interlaced through stitches (on wrong side of rug) of the preceding row, to offset any tendency to curve up. Loose ends at start of rows and throughout the work may be crocheted over or interlaced afterwards.

Colors: 14, as given below. Note the abbreviations and that all are given in small letters except *L* for lilac. Other abbreviations are *st* for stitch and *ch* for chain.

Brown (br) — a rusty shade.

Dark brown (dbr) — a deeper rusty shade, or walnut or tobacco brown.

Blue (bl) — grey-blue of medium tone, sometimes called French blue, sometimes old blue. Do not use the light blue called sky-blue.

Dark blue (dbl) — a subdued royal blue; used in flag and pennant only.

Green (g) — medium sage-green, the grey-green found in sea tones.

Beige (b) — light tan with a suggestion of pink in the tone.

Écru (e) — the shade known as *café au lait.*

Lilac (L) — a light shade with a pink hue.

Mulberry (m) — a medium tone, preferably with a purple cast, a lavender.

Purple (p) — a somewhat deeper tone of lavender. Three shades of lilac or three shades of lavender may be used.

Red (r) — a subdued tone; used only in the flag.

White (w) — oyster-white or very light pearl-grey.

Yellow (y) — lemon-yellow.

Orange (o) — a soft rich tone found in some orange-skins, car-

rot color. *Note:* 10, 20, etc., means 1 orange, 2 orange, and *never* ten, twenty, etc.

Always use subdued tones, never strong colors. They should have a certain " body " to suit rug work.

Into a ch of 107 sts make 1 row of 107 Russian sts. Start row with 2ch.

2nd row: ch 2 and complete row of 107 sts.

3rd row: same as 2nd row.

4th row: 2ch, 3br, 101g, 3br.

5th row: 2ch, 3br, 7g, #, 3b, 6g, (repeat 8 times from #) 3b, 10g, 3br.

6th row: 2ch, 3br, 6g, #, 5b, 4g, (repeat 8 times from #) 5b, 9g, 3br.

7th row: 2ch, 3br, 6g, #, 1b, 1g, 3b, 4g, (repeat 8 times from #) 1b, 1g, 3b, 9g, 3br.

8th row: 2ch, 3br, 8g, #, 4b, 5g, (repeat 8 times from #) 4b, 8g, 3br.

9th row: 2ch, 3br, 7g, #, 6b, 3g, (repeat 8 times from #) 6b, 7g, 3br.

10th row: 2ch, 3br, 6g, 89b, 2g, 2b, 2g, 3br.

11th row: 2ch, 3br, 5g, 2b, 26g, 3L, 5m, 53bl, 2b, 2g, 2b, 1g, 3br.

12th row: 2ch, 3br, 4g, 3b; continue same as 11th row to border; 6b, 1g, 3br.

13th row: 2ch, 3br, 2g, 5b; continue same as 11th row to end of row.

14th row: 2ch, 3br, 1gr, 6b, 26g, 1b, 2L; continue same as 11th row to border; 5b, 2g, 3br.

15th row: 2ch, 3br, 1g, 6b, 26g, 2b, 1L; continue same as 11th row to border; 3b, 4g, 3br.

16th row: 2ch, 3br, 1g, 2b, 2g, 2b, 26g, 3b; continue same as 15th row to border; 2b, 5g, 3br.

17th row: 2ch, 3br, 2g, 2b, 2g, 1b, 26g, 2e, 1b, 5m, 23bl, 7b, 23bl, 1b, 6g, 3br.

18th row: 2ch, 3br, 6g, 1b, 26g, 2e, 1b, 5m, 22bl, 2b, 1e, 6b, 22bl, 1b, 6g, 3br.

19th row: 2ch, 3br, 6g, 1b, 26g, 3e, 1b, 4m, 11bl, 3b, 7bl, 3b, 4e, 4b, 21bl, 1b, 2g, 2b, 2g, 3br.

20th row: 2ch, 3br, 5g, 2b, 26g, 3e, 1b, 4m, 10bl, 5b, 5bl, 3b, 5e, 5b, 20bl, 2b, 2g, 2b, 1g. 3br.

21st row: 2ch, 3br, 4g, 3b, 26g, 4e, 1b, 3m, 10bl, 6b, 1bl, 2b, 1bl, 3b, 6e, 5b, 19bl, 6b, 1g, 3br.

22nd row: 2ch, 3br, 2g, 5b, 26g, 4e, 1b, 3m, 10bl, 9b, 1bl, 3b, 7e, 5b, 18bl, 6b, 1g, 3br.

23rd row: 2ch, 3br, 1g, 6b, 26g, 4e, 1b, 3m, 10bl, 13b, 9e, 4b, 17bl, 5b, 2g, 3br.

24th row: 2ch, 3br, 1g, 6b, 26g, 4e, 1b, 3m, 11bl, 8b, 1e, 2b, 10e, 4b, 17bl, 3b, 4g, 3br.

25th row: 2ch, 3br, 1g, 2b, 2g, 2b, 26g, 2e, 2b, 4m, 11bl, 6b, 4e, 1b, 10e, 4b, 17bl, 2b, 5g, 3br.

26th row: 2ch, 3br, 2g, 2b, 2g, 1b, 26g, 2e, 2b, 4m, 11bl, 6b, 15e, 5b, 16bl, 1b, 6g, 3br.

27th row: 2ch, 3br, 6g, 1b, 26g, 2e, 1b, 5m, 12bl, 4b, 16e, 5b, 16bl, 1b, 6g, 3br.

28th row: 2ch, 3br, 6g, 1b, 26g, 2e, 1b, 5m, 7bl, 1dbr, 4bl, 4b, 16e, 4b, 17bl, 1b, 2g, 2b, 2g, 3br.

29th row: 2ch, 3br, 5g, 2b, 22g, 1w, 3g, 2b, 1L, 5m, 6bl, 1dbr, 6bl, 5b, 14e, 4b, 17bl, 2b, 2g, 2b, 1g, 3br.

30th row: 2ch 3br, 4g, 3b, 22g, 1w, 3g, 2b, 1L, 5m, 5bl, 1dbr, 7bl, 4b, 15e, 3b, 18bl, 6b, 1g, 3br.

31st row: 2ch, 3br, 2g, 5b, 26g, 2b, 1L, 5m, 5bl, 1dbr, 7bl, 4b, 14e, 4b, 18bl, 6b, 1g, 3br.

32nd row: 2ch, 3br, 1g, 6b, 26g, 2b, 1L, 5m, 4bl, 1dbr, 7bl, 5b, 14e, 4b, 18bl, 5b, 2g, 3br.

33rd row: 2ch, 3br, 1g, 6b, 26g, 1b, 2L, 5m, 4bl, 1dbr, 7bl, 6b, 5e, 1b, 7e, 4b, 18bl, 3b, 4g, 3br.

34th row: 2ch, 3br, 1g, 2b, 2g, 2b, 26g, 1b, 2L, 5m, 3bl, 1dbr, 8bl, 6b, 5e, 1b, 5e, 5b, 19bl, 2b, 5g, 3br.

35th row: 2ch, 3br, 2g, 2b, 2g, 1b, 26g, 3L, 5m, 2bl, 2dbr, 8bl, 8b, 3e, 1b, 6e, 4b, 19bl, 1b, 6g, 3br.

36th row: 2ch, 3br, 6g, 1b, 26g, 3L, 5m, 2bl, 1dbr, 9bl, 9b, 2e, 1b, 6e, 3b, 20bl, 1b, 6g, 3br.

37th row: 2ch, 3br, 6g, 1b, 19g, 1w, 6g, 3L, 5m, 1bl, 1dbr, 1bl, 10, 8bl, 10b, 1e, 2b, 5e, 3b, 20bl, 1b, 2g, 2b, 2g, 3br.

38th row: 2ch, 3br, 5g, 2b, 19g, 1w, 6g, 3L, 5m, 2dbr, 1bl, 20, 7bl, 13b, 5e, 3b, 20bl, 2b, 2g, 2b, 1g, 3br.

39th row: 2ch, 3br, 4g, 3b, 19g, 1w, 6g, 3L, 4m, 2dbr, 1bl, 2L, 1y, 10, 7bl, 13b, 4e, 3b, 20bl, 6b, 1g, 3br.

40th row: 2ch, 3br, 2g, 5b, 26g, 3L, 4m, 1dbr, 2bl, 2L, 1y, 20, 6bl, 8b, 1bl, 4b, 4e, 2b, 21bl, 6b, 1g, 3br.

41st row: 2ch, 3br, 1g, 6b, 26g, 3L, 3m, 1dbr, 1m, 1bl, 2m, 2y, 30, 5bl, 8b, 2bl, 4b, 2e, 3b, 21bl, 5b, 2g, 3br.

42nd row: 2ch, 3br, 1g, 6b, 26g, 3L, 3m, 1dbr, 1m, 1bl, 2L, 3y, 30, 5bl, 8b, 2bl, 4b, 1e, 3b, 21bl, 3b, 4g, 3br.

43rd row: 2ch, 3br, 1g, 2b, 2g, 2b, 26g, 3L, 2m, 1dbr, 2m, 1bl, 2L, 4y, 20, 6bl, 7b, 3bl, 6b, 22bl, 2b, 5g, 3br.

44th row: 2ch, 3br, 2g, 2b, 2g, 1b, 21g, 1w, 4g, 3L, 2m, 1dbr, 2m, 3L, 5y, 20, 7bl, 5b, 3bl, 5b, 23bl, 1b, 6g, 3br.

45th row: 2ch, 3br, 6g, 1b, 21g, 1w, 4g, 3L, 1m, 1dbr, 3m, 2L, 6y, 20, 8bl, 4b, 4bl, 4b, 23bl, 1b, 6g, 3br.

46th row: 2ch, 3br, 6g, 1b, 21g, 1w, 4g, 3L, 2dbr, 3m, 1L, 8y, 20, 8bl, 2b, 32bl, 1b, 2g, 2b, 2g, 3br.

47th row: 2ch, 3br, 5g, 2b, 26g, 3L, 1dbr, 3m, 1L, 10y, 20, 41bl, 2b, 2g, 2b, 1g, 3br.

48th row: 2ch, 3br, 4g, 3b, 26g, 2L, 2dbr, 1m, 3y, 6bl, 5y, 20, 40bl, 6b, 1g, 3br.

49th row: 2ch, 3br, 2g, 5b, 26g, 1L, 2dbr, 3y, 2m, 9bl, 3y, 10, 40bl, 6b, 1g, 3br.

50th row: 2ch, 3br, 1g, 6b, 26g, 1L, 1dbr, 2y, 4m, 10bl, 3y, 10, 39bl, 5b, 2g, 3br.

51st row: 2ch, 3br, 1g, 6b, 17g, 1w, 6g, 3dbr, 2y, 5m, 12bl, 1m, 10, 39bl, 3b, 4g, 3br.

52nd row: 2ch, 3br, 1g, 2b, 2g, 2b, 17g, 1w, 5g, 4dbr, 1y, 1L, 1m, 5o, 12bl, 1m, 10, 38bl, 2b, 5g, 3br.

53rd row: 2ch, 3br, 2g, 2b, 2g, 1b, 17g, 1w, 3g, 2dbr, 1bl, 2dbr, 3L, 4y, 3o, 12bl, 1m, 38bl, 1b, 6g, 3br.

54th row: 2ch, 3br, 6g, 1b, 16g, 2w, 3g, 1dbr, 1bl, 2dbr, 1g, 2L, 5y, 4o, 5bl, 5o, 2bl, 10, 37bl, 1b, 6g, 3br.

55th row: 2ch, 3br, 6g, 1b, 10g, 1w, 4g, 3w, 3g, 1dbr, 1bl, 2dbr, 1g, 1p, 1m, 5y, 4o, 4bl, 6o, 2bl, 10, 37bl, 1b, 2g, 2b, 2g, 3br.

56th row: 2ch, 3br, 5g, 2b, 10g, 1w, 4g, 4w, 1g, 1dbr, 1bl, 3dbr, 1m, 1p, 1m, 5y, 4o, 1dbr, 2bl, 1m, 5y, 3o, 1bl, 10, 36bl, 2b, 2g, 2b, 1g, 3br.

57th row: 2ch, 3br, 4g, 3b, 10g, 1w, 3g, 5w, 2dbr, 2bl, 2dbr, 1g, 1p, 1m, 5y, 4o, 1dbr, 2bl, 1m, 5y, 4o, 1bl, 10, 35bl, 6b, 1g, 3br.

58th row: 2ch, 3br, 2g, 5b, 10g, 1w, 3g, 1w, 1g, 2w, 2br, 1dbr, 2bl, 2dbr, 1g, 1p, 1m, 6y, 3o, 1dbr, 2bl, 1m, 5y, 4o, 1bl, 1dbr, 2bl, 6o, 27bl, 6b, 1g, 3br.

59th row: 2ch, 3br, 1g, 6b, 10g, 2w, 2g, 1w, 1g, 1w, 3br, 1dbr, 1bl, 4dbr, 1p, 1m, 6y, 3o, 1dbr, 1bl, 2m, 6y, 4o, 1dbr, 1bl, 1m, 3y, 5o, 25bl, 5b, 2g, 3br.

60th row: 2ch, 3br, 1g, 6b, 10g, 2w, 2g, 1w, 1g, 1w, 3br, 1dbr, 2bl, 3dbr, 1p, 1m, 6y, 3o, 1dbr, 1p, 2m, 6y, 4o, 1dbr, 1bl, 1m, 4y, 5o, 24bl, 3b, 4g, 3br.

61st row: 2ch, 3br, 1g, 2b, 2g, 2b, 11g, 1w, 2g, 1w, 1g, 2w, 2br, 1dbr, 2bl, 3dbr, 1p, 1m, 7y, 2o, 1dbr, 1p, 2m, 6y, 4o, 1dbr, 1p, 1m, 5y, 5o, 23bl, 2b, 5g, 3br.

62nd row: 2ch, 3br, 2g, 2b, 2g, 1b, 11g, 1w, 2g, 1w, 2g, 1w, 1br, 1dbr, 3bl, 1dbr, 2g, 1p, 1m, 7y, 2o, 1dbr, 1p, 2m, 6y, 4o, 1dbr, 1p, 1m, 5y, 6o, 22bl, 1b, 6g, 3br.

63rd row: 2ch, 3br, 6g, 1b, 14g, 1w, 2g, 2w, 1dbr, 2bl, 2dbr, 2g, 1p, 2m, 6y, 1o, 2dbr, 1p, 3m, 5y, 4o, 1dbr, 1p, 1m, 5y, 7o, 21bl, 1b, 6g, 3br.

64th row: 2ch, 3br, 6g, 1b, 17g, 1w, 1br, 1dbr, 3bl, 1dbr, 1g, 2p, 2m, 6y, 1o, 2dbr, 1p, 3m, 6y, 3o, 1dbr, 1p, 1m, 5y, 7o, 2dbr, 19bl, 1b, 2g, 2b, 2g, 3br.

65th row: 2ch, 3br, 5g, 2b, 17g, 1w, 1br, 1dbr, 3bl, 1dbr, 1g, 2p, 2m, 6y, 10, 2dbr, 2p, 2m, 6y, 30, 1dbr, 1p, 3m, 3y, 70, 5dbr, 3dbl, 13bl, 2b, 2g, 2b, 1g, 3br.

66th row: 2ch, 3br, 4g, 3b, 17g, 1w, 1br, 1dbr, 2bl, 2dbr, 1g, 2p, 3m, 5y, 10, 1dbr, 3p, 2m, 6y, 30, 1dbr, 2p, 1m, 6bl, 50, 5bl, 2dbl, 1w, 13bl, 6b 1g, 3br.

67th row: 2ch, 3br, 2g, 5b, 16g, 1w, 2br, 1dbr, 1bl, 3dbr, 1g, 3p, 2m, 5y, 10, 1dbr, 3p, 3m, 5y, 30, 1dbr, 2p, 9bl, 20, 6bl, 3dbl, 13bl, 6b, 1g, 3br.

68th row: 2ch, 3br, 1g, 6b, 16g, 1w, 2br, 1dbr, 2bl, 2dbr, 3p, 2L, 1m, 5y, 10, 1dbr, 3p, 3m, 7bl, 10, 1dbr, 1p, 11bl, 1dbr, 5bl, 2dbl, 1w, 1dbl, 13bl, 5b, 2g, 3br.

69th row: 2ch, 3br, 1g, 6b, 12g, 1w, 2g, 1w, 3br, 1dbr, 2bl, 2dbr, 2p, 3L, 3m, 3y, 10, 1dbr, 3p, 1m, 10bl, 1dbr, 12bl, 1dbr, 5bl, 1w, 3dbl, 13bl, 3b, 4g, 3br.

70th row: 2ch, 3br, 1g, 2b, 2g, 2b, 12g, 1w, 2g, 1w, 3br, 1dbr, 2bl, 2dbr, 1p, 1g, 3L, 5m, 1bl, 10, 1dbr, 2p, 12bl, 1dbr, 17bl, 4dbl, 14bl, 2b, 5g, 3br.

71st row: 2ch, 3br, 2g, 2b, 2g, 1b, 12g, 1w, 2g, 1w, 3br, 1dbr, 1bl, 3dbr, 2g, 3L, 5m, 2bl, 1dbr, 14bl, 1dbr, 17bl, 1w, 1dbl, 1w, 1dbl, 14bl, 1b, 6g, 3br.

72nd row: 2ch, 3br, 6g, 1b, 12g, 1w, 2g, 1w, 3br, 1dbr, 2bl, 2dbr, 2g, 3L, 5m, 2bl, 1dbr, 50bl, 1b, 6g, 3br.

73rd row: 2ch, 3br, 6g, 1b, 12g, 2w, 1g, 1w, 3br, 1dbr, 2bl, 2dbr, 2g, 3L, 5m, 2bl, 1dbr, 5bl, 10, 44bl, 1b, 2g, 2b, 2g, 3br.

74th row: 2ch, 3br, 5g, 2b, 12g, 2w, 1g, 1w, 2br, 2dbr, 1bl, 2dbr, 3g, 3L, 5m, 7bl, 50, 41bl, 2b, 2g, 2b, 1g, 3br.

75th row: 2ch, 3br, 4g, 3b, 6g, 1w, 5g, 2w, 2g, 2br, 1dbr, 3bl, 1dbr, 3g, 3L, 5m, 2bl, 10, 1bl, 1dbr, 1bl, 80, 39bl, 6b, 1g, 3br.

76th row: 2ch, 3br, 2g, 5b, 6g, 1w, 6g, 1w, 2g, 2br, 1dbr, 3bl, 1dbr, 3g, 3L, 5m, 1p, 20, 1bl, 1dbr, 1bl, 1m, 3y, 40, 5bl, 1dbr, 2bl, 30, 28bl, 6b, 1g 3br.

77th row: 2ch, 3br, 1g, 6b, 6g, 2w, 8g, 2br, 1dbr, 2bl, 2dbr, 40, 2L,

5m, 1p, 2y, 10, 1dbr, 2m, 4y, 50, 3bl, 1dbr, 1bl, 1m, 2y, 40, 25bl, 5b, 2g, 3br.

78th row: 2ch, 3br, 1g, 6b, 7g, 1w, 8g, 2br, 1dbr, 3bl, 1dbr, 90, 2m, 1p, 1y, 20, 1dbr, 2m, 4y, 70, 1bl, 1dbr, 1p, 1m, 2y, 60, 23bl, 3b, 4g, 3br.

79th row: 2ch, 3br, 1g, 2b, 2g, 2b, 7g, 1w, 9g, 1br, 1dbr, 3bl, 1dbr, 3g, 2L, 60, 2m, 10, 2dbr, 3m, 4y, 70, 1dbr, 1p, 1m, 6y, 40, 21bl, 2b, 5g, 3br.

80th row: 2ch, 3br, 2g, 2b, 2g, 1b, 7g, 1w, 9g, 1br, 1dbr, 2bl, 6dbr, 2L, 7m, 10, 2dbr, 3m, 4y, 70, 1dbr, 1p, 1m, 7y, 40, 20bl, 1b, 6g, 3br.

81st row: 2ch, 3br, 6g, 1b, 17g, 1w, 1dbr, 2bl, 9dbr, 2m, 50, 2dbr, 3m, 4y, 70, 1dbr, 1p, 1m, 7y, 60, 18bl, 1b, 6g, 3br.

82nd row: 2ch, 3br, 6g, 1b, 17g, 1w, 1dbr, 1bl, 12dbr, 3y, 20, 1dbr, 1p, 3m, 4y, 70, 1dbr, 1p, 1m, 7y, 60, 1bl, 1dbr, 16bl, 1b, 2g, 2b, 2g, 3br.

83rd row: 2ch, 3br, 5g, 2b, 17g, 1w, 1dbr, 2bl, 2dbr, 3g, 2L, 4dbr, 3y, 20, 1dbr, 1p, 3m, 4y, 70, 1dbr, 1p, 1m, 8y, 60, 1dbr, 16bl, 2b, 2g, 2b, 1g, 3br.

84th row: 2ch, 3br, 4g, 3b, 17g, 1w, 1dbr, 2bl, 2dbr, 3g, 3L, 2m, 1p, 3y, 10, 2dbr, 2p, 2m, 4y, 70, 1dbr, 1p, 1m, 8y, 60, 17bl, 6b, 1g, 3br.

85th row: 2ch, 3br, 2g, 5b, 12g, 1w, 4g, 1w, 1dbr, 2bl, 2dbr, 3g, 3L, 20, 1p, 3y, 10, 2dbr, 2p, 2m, 4y, 70, 1dbr, 1p, 2m, 7y, 60, 17bl, 6b, 1g, 3br.

86th row: 2ch, 3br, 1g, 6b, 12g, 1w, 4g, 1w, 1dbr, 1bl, 3dbr, 3g, 2L, 10, 1m, 10, 2p, 2y, 10, 1dbr, 3p, 2m, 4y, 70, 1dbr, 1p, 2m, 7y, 60, 2dbr, 15bl, 5b, 2g, 3br.

87th row: 2ch, 3br, 1g, 6b, 12g, 1w, 4g, 1w, 1dbr, 2bl, 2dbr, 80, 2p, 1m, 10, 2dbr, 3p, 3m, 3y, 70, 1dbr, 2p, 1m, 3y, 3bl, 1y, 60, 6dbr, 11bl, 3b, 4g, 3br.

88th row: 2ch, 3br, 1g, 2b, 2g, 2b, 12g, 2w, 3g, 1w, 1dbr, 2bl, 2dbr, 20, 1w, 30, 3m, 2p, 10. 2dbr, 3p, 4m, 2y, 6bl, 10, 1dbr, 2p, 2m, 1y, 8bl, 30, 5bl, 4dbr, 8bl, 2b, 5g, 3br.

89th row: 2ch, 3br, 2g, 2b, 2g, 1b, 12g, 2w, 2g, 1w, 1br, 1dbr, 2bl, 2dbr, 40, 2L, 4m, 20, 2dbr, 3p, 2m, 11bl, 1dbr, 1p, 13bl, 20, 7bl, 2dbl, 8bl, 1b, 6g, 3br.

90th row: 2ch, 3br, 6g, 1b, 13g, 1w, 2g, 1w, 1br, 1dbr, 1bl, 3dbr, 3g, 3L, 2m, 3y, 10, 2dbr, 3p, 13bl, 1dbr, 14bl, 20, 7bl, 2dbl, 8bl, 1b, 6g, 3br.

91st row: 2ch, 3br, 6g, 1b, 13g, 1w, 2g, 1w, 1br, 1dbr, 2bl, 2dbr, 3g, 3L, 1m, 1p, 3y, 10, 1dbr, 4p, 12bl, 2dbr, 14bl, 1dbr, 10, 6bl, 3dbl, 8bl, 1b, 2g, 2b, 2g, 3br.

92nd row: 2ch, 3br, 5g, 2b, 13g, 1w, 2g, 1w, 1br, 1dbr, 2bl, 2dbr, 3g, 3L, 1m, 2p, 2y, 10, 1dbr, 2p, 14bl, 1dbr, 15bl, 1dbr, 7bl, 2dbl, 9bl, 2b, 2g, 2b, 1g, 3br.

93rd row: 2ch, 3br, 4g, 3b, 16g, 1w, 1br, 1dbr, 1bl, 3dbr, 3g, 3L, 1m, 2p, 2y, 10, 1dbr, 2p, 4bl, 40, 6bl, 1dbr, 15bl, 1dbr, 7bl, 1dbl, 10bl, 6b, 1g, 3br.

94th row: 2ch, 3br, 2g, 5b, 16g, 1w, 1br, 1dbr, 2bl, 2dbr, 3g, 3L, 1m, 4p, 10, 1dbr, 1p, 4bl, 70, 28bl, 1dbl, 10bl, 6b, 1g, 3br.

95th row: 2ch, 3br, 1g, 6b, 16g, 1w, 1br, 1dbr, 2bl, 2dbr, 3g, 3L, 5m, 10, 1dbr, 1p, 3bl, 100, 26bl, 1dbl, 10bl, 5b, 2g, 3br.

96th row: 2ch, 3br, 1g, 6b, 16g, 1w, 1br, 1dbr, 1bl, 3dbr, 3g, 3L, 5m, 1bl, 1dbr, 4bl, 1m, 5y, 40, 26bl, 1dbl, 10bl, 3b, 4g, 3br.

97th row: 2ch, 3br, 1g, 2b, 2g, 2b, 16g, 2br, 1dbr, 2bl, 2dbr, 3g, 3L, 5m, 1bl, 1dbr, 1bl, 1dbr, 1bl, 2m, 5y, 50, 1bl, 1dbr, 2bl, 30, 18bl, 1dbl, 10bl, 2b, 5g, 3br.

98th row: 2ch, 3br, 2g, 2b, 2g, 1b, 16g, 2br, 1dbr, 2bl, 2dbr, 3g, 3L, 5m, 3bl, 1dbr, 1bl, 2m, 5y, 60, 1dbr, 1bl, 1m, 2y, 30, 16bl, 2dbl, 9bl, 1b, 6g, 3br.

99th row: 2ch, 3br, 6g, 1b, 16g, 2br, 1dbr, 1bl, 3dbr, 3g, 3L, 5m, 2bl, 2dbr, 3m, 8y, 30, 1dbr, 1p, 1m, 3y, 30, 15bl, 2dbl, 9bl, 1b, 6g, 3br.

100th row: 2ch, 3br, 6g, 1b, 16g, 2br, 1dbr, 2bl, 10dbr, 3m, 2bl, 2dbr, 3m, 8y, 30, 1dbr, 1p, 1m, 3y, 40, 1bl, 1dbr, 13bl, 1dbl, 9bl, 1b, 2g, 2b, 2g, 3br.

101st row: 2ch, 3br, 5g, 2b, 4g, 1w, 5g, 1w, 5g, 2br, 1dbr, 2bl, 16dbr, 2p, 2m, 10y, 10, 1dbr, 1p, 1m, 3y, 40, 1bl, 1dbr, 23bl, 2b, 2g, 2b, 1g, 3br.

102nd row: 2ch, 3br, 4g, 3b, 4g, 1w, 5g, 2w, 5g, 1br, 1dbr, 1bl, 3dbr, 10, 2g, 3L, 1m, 7dbr, 3p, 2m, 9y, 10, 1dbr, 1p, 1m, 3y, 50, 1dbr, 23bl, 6b, 1g, 3br.

103rd row: 2ch, 3br, 2g, 5b, 4g, 1w, 5g, 2w, 5g, 1br, 1dbr, 2bl, 2dbr, 10, 2g, 3L, 5m, 2bl, 1dbr, 3p, 2m, 9y, 10, 1dbr, 1p, 1m, 3y, 50, 1dbr, 23bl, 6b, 1g, 3br.

104th row: 2ch, 3br, 1g, 6b, 11g, 1w, 5g, 1br, 1dbr, 2bl, 3dbr, 1p, 110, 1dbr, 4p, 1m, 9y, 10, 1dbr, 1p, 1m, 3y, 50, 4dbr, 20bl, 5b, 2g, 3br.

105th row: 2ch, 3br, 1g, 6b, 17g, 1br, 1dbr, 1bl, 4dbr, 1p, 1m, 3y, 70, 1dbr, 4p, 3bl, 7y, 10, 1dbr, 1p, 1m, 4y, 40, 1dbr, 2bl, 8dbr, 13bl, 3b, 4g, 3br.

106th row: 2ch, 3br, 1g, 2b, 2g, 2b, 16g, 1w, 1br, 2dbr, 1bl, 3dbr, 1p, 1m, 3y, 70, 1dbr, 3p, 10bl, 1y, 10, 1dbr, 1p, 2m, 5y, 20, 1dbr, 4bl, 5dbl, 14bl, 2b, 5g, 3br.

107th row: 2ch, 3br, 2g, 2b, 2g, 1b, 16g, 2w, 1g, 1dbr, 2bl, 2dbr, 1p, 1m, 6y, 40, 1dbr, 3p, 11bl, 10, 1dbr, 2p, 6bl, 20, 1dbr, 4bl, 1dbl, 1w, 1dbl, 1w, 1dbl, 14bl, 1b, 6g, 3br.

108th row: 2ch, 3br, 6g, 1b, 16g, 2w, 1g, 1dbr, 2bl, 2dbr, 1p, 2m, 8y, 10, 1dbr, 20, 1p, 1dbr, 11bl, 1dbr, 1p, 8bl, 1dbr, 4bl, 6dbl, 14bl, 1b, 6g, 3br.

109th row: 2ch, 3br, 6g, 1b, 15g, 3w, 2g, 1dbr, 1bl, 2dbr, 2p, 1m, 8y, 10, 1dbr, 30, 1dbr, 11bl, 1dbr, 9bl, 1dbr, 4bl, 3dbl, 17bl, 1b, 2g, 2b, 2g, 3br.

110th row: 2ch, 3br, 5g, 2b, 15g, 3w, 2g, 4dbr, 2p, 1m, 8y, 10, 1dbr, 2bl, 10, 1dbr, 21bl, 1dbr, 4bl, 1dbl, 1w, 1dbl, 17bl, 2b, 2g, 2b, 1g, 3br.

111th row: 2ch, 3br, 4g, 3b, 15g, 1w, 1g, 1w, 4g, 2dbr, 2p, 1m, 8y, 5bl, 2dbr, 25bl, 3dbl, 17bl, 6b, 1g, 3br.

112th row: 2ch, 3br, 2g, 5b, 15g, 1w, 1g, 1w, 7g, 1p, 2m, 6y, 7bl, 2dbr, 44bl, 6b, 1g, 3br.

113th row: 2ch, 3br, 1g, 6b, 15g, 1w, 9g, 2p, 2m, 3y, 2m, 8bl, 1dbr, 44bl, 5b, 2g, 3br.

114th row: 2ch, 3br, 1g, 6b, 15g, 1w, 10g, 2p, 1m, 2y, 3m, 8bl, 1w, 1dbr, 43bl, 3b, 4g, 3br.

115th row: 2ch, 3br, 1g, 2b, 2g, 2b, 15g, 1w, 10g, 2p, 1m, 1y, 4m, 1w, 1r, 1w, 1r, 1dbl, 1w, 1dbl, 46bl, 2b, 5g, 3br.

116th row: 2ch, 3br, 2g, 2b, 2g, 1b, 15g, 1w, 10g, 2p, 6m, 1w, 1r, 1w, 1r, 1w, 1dbl, 1w, 46bl, 1b, 6g, 3br.

117th row: 2ch, 3br, 6g, 1b, 15g, 1w, 10g, 1L, 1p, 1m, 4w, 1m, 1w, 1r, 1w, 1r, 1dbl, 1w, 1dbl, 46bl, 1b, 6g, 3br.

118th row: 2ch, 3br, 6g, 1b, 15g, 1w, 10g, 1L, 2p, 3m, 1r, 1w, 1r, 1w, 1r, 1w, 3r, 5bl, 3b, 38bl, 1b, 2g, 2b, 2g, 3br.

119th row: 2ch, 3br, 5g, 2b, 15g, 1w, 10g, 2L, 1p, 3m, 1r, 1w, 3r, 1w, 1r, 1bl, 1r, 4bl, 6b, 36bl, 2b, 2g, 2b, 1g, 3br.

120th row: 2ch, 3br, 4g, 3b, 15g, 1w, 10g, 3L, 3m, 1r, 1w, 1r, 1w, 1r, 1w, 1r, 5bl, 9b, 34bl, 6b, 1g, 3br.

121st row: 2ch, 3br, 2g, 5b, 26g, 3L, 3m, 1w, 1r, 1w, 1r, 1w, 2r, 4bl, 6b, 3e, 2b, 33bl, 6b, 1g, 3br.

122nd row: 2ch, 3br, 1g, 6b, 26g, 3L, 3m, 1w, 1r, 1w, 1r, 1w, 2r, 4bl, 5b, 4e, 3b, 32bl, 5b, 2g, 3br.

123rd row: 2ch, 3br, 1g, 6b, 26g, 3L, 3m, 1w, 1r, 1w, 1r, 1w, 2r, 3bl, 4b, 7e, 3b, 31bl, 3b, 4g, 3br.

124th row: 2ch, 3br, 1g, 2b, 2g, 2b, 26g, 3L, 3m, 1w, 1r, 1w, 1r, 1w, 2r, 3bl, 4b, 8e, 2b, 31bl, 2b, 5g, 3br.

125th row: 2ch, 3br, 2g, 2b, 2g, 1b, 18g, 1w, 7g, 3L, 5m, 9bl, 3b, 8e, 3b, 30bl, 1b, 6g, 3br.

126th row: 2ch, 3br, 6g, 1b, 18g, 1w, 7g, 3L, 5m, 10bl, 2b, 7e, 4b, 30bl, 1b, 6g, 3br.

127th row: 2ch, 3br, 6g, 1b, 18g, 1w, 7g, 3L, 5m, 9bl, 3b, 7e, 4b, 30bl, 1b, 2g, 2b, 2g, 3br.

128th row: 2ch, 3br, 5g, 2b, 26g, 3L, 5m, 9bl, 3b, 2e, 2b, 4e, 2b, 31bl, 2b, 2g, 2b, 1g, 3br.

129th row: 2ch, 3br, 4g, 3b, 21g, 1w, 4g, 3L, 5m, 8bl, 4b, 1e, 4b, 2e, 2b, 32bl, 6b, 1g, 3br.

130th row: 2ch, 3br, 2g, 5b, 21g, 1w, 4g, 3L, 5m, 8bl, 4b, 1e, 2b, 1bl, 4b, 33bl, 6b, 1g, 3br.

131st row: 2ch, 3br, 1g, 6b, 26g, 3L, 5m, 7bl, 4b, 2e, 1b, 4bl, 1b, 34bl, 5b, 2g, 3br.

132nd row: 2ch, 3br, 1g, 6b, 26g, 3L, 5m, 6bl, 4b, 3e, 2b, 38bl, 3b, 4g, 3br.

133rd row: 2ch, 3br, 1g, 2b, 2g, 2b, 26g, 3L, 5m, 6bl, 4b, 3e, 1b, 39bl, 2b, 5g, 3br.

134th row: 2ch, 3br, 2g, 2b, 2g, 1b, 26g, 3L, 5m, 6bl, 4b, 3e, 1b, 39bl, 1b, 6g, 3br.

135th row: 2ch, 3br, 6g, 1b, 26g, 3L, 5m, 7bl, 3b, 3e, 1b, 39bl, 1b, 6g, 3br.

136th row: 2ch, 3br, 6g, 1b, 26g, 3L, 5m, 8bl, 2b, 2e, 1b, 40bl, 1b, 2g, 2b, 2g, 3br.

137th row: 2ch, 3br, 5g, 2b, 26g, 3L, 5m, 8bl, 4b, 41bl, 2b, 2g, 2b, 1g, 3br.

138th row: 2ch, 3br, 4g, 3b, 26g, 3L, 5m, 9bl, 2b, 42bl, 6b, 1g, 3br.

139th row: 2ch, 3br, 2g, 5b, 26g, 3L, 5m, 53bl, 6b, 1g, 3br.

140th row: 2ch, 3br, 1g, 6b, 26g, 3L, 5m, 53bl, 5b, 2g, 3br.

141st row: 2ch, 3br, 1g, 6b, 26g, 3L, 5m, 53bl, 3b, 4g, 3br.

142nd row: 2ch, 3br, 1g, 2b, 2g, 2b, 26g, 3L, 5m, 53bl, 2b, 5g, 3br.

143rd row: 2ch, 3br, 2g, 2b, 2g, 89b, 6g, 3br.

144th row: 2ch, 3br, 7g, #, 6b, 3g, (repeat from # 8 times) 6b, 7g, 3br.

145th row: 2ch, 3br, 8g, #, 4b, 5g, (repeat from # 8 times) 4b, 8g, 3br.

146th row: 2ch, 3br, 9g, #, 3b, 1g, 1b, 4g, (repeat from # 8 times) 3b, 1g, 1b, 6g, 3br.

147th row: 2ch, 3br, 9g, #, 5b, 4g, (repeat from # 8 times) 5b, 6g, 3br.

148th row: 2ch, 3br, 10g, #3b, 6g, (repeat from # 8 times) 3b, 7g, 3br.

149th row: 2ch, 3br, 101g, 3br.

150th, 151st, 152nd: each 2ch, 107 br.

"Cave Canem" Rug

(Chapter XIII)

Black, white, and grey are the colors used. Each completed tessera is formed of two discs. The color of the top one determines its name. When the under one measures one inch in diameter (top one five-eighths inch) the rug measures thirty-eight and one-half by forty-eight inches.

Each row of tesseræ must fit closely into the spaces left by the tesseræ in the preceding row.

Make the tesseræ before sewing them to the rug foundation. Stitchery should be inconspicuous and taken with strong thread matching the color of the fabric on which it is used.

Start work on lengthwise edge of rug foundation marked off with parallel lines one inch apart drawn across the rug. The top row of tesseræ fits into spaces; the next row has diameters across the lines.

1st row: 48 black.
2nd row: 47 black.
3rd row: 3 black, 42 white, 3 black.
4th row: 2 black, 16 white, 1 black, 26 white, 2 black.
5th row: 3 black, 11 white, 1 black, 4 white, 1 black, 25 white, 3 black.
6th row: 2 black, 10 white, 2 black, 5 white, 1 black, 25 white, 2 black.
7th row: 3 black, 9 white, 2 black, 6 white, 1 black, 24 white, 3 black.
8th row: 2 black, 9 white, 3 black, 6 white, 1 black, 24 white, 2 black.
9th row: 3 black, 8 white, 3 black, 7 white, 1 black, 23 white, 3 black.
10th row: 2 black, 9 white, 3 black, 7 white, 1 black, 6 white, 1 black, 16 white, 2 black.

11th row: 3 black, 9 white, 4 black, 6 white, 1 black, 4 white, 2 black, 3 white, 2 black, 11 white, 3 black.

12th row: 2 black, 11 white, 8 black, 1 white, 1 black, 3 white, 2 black, 2 white, 2 black, 13 white, 2 black.

13th row: 3 black, 12 white, 7 black, 1 white, 1 black, 2 white, 6 black, 13 white, 3 black.

14th row: 2 black, 12 white, 8 black, 1 white, 1 black, 1 white, 7 black, 13 white, 2 black.

15th row: 3 black, 11 white, 3 black, 2 grey, 4 black, 1 white, 5 black, 1 white, 5 black, 10 white, 3 black.

16th row: 2 black, 11 white, 3 black, 4 grey, 3 black, 1 white, 10 black, 11 white, 2 black.

17th row: 3 black, 11 white, 3 black, 3 grey, 11 black, 14 white, 3 black.

18th row: 2 black, 12 white, 3 black, 3 grey, 13 black, 12 white, 2 black.

19th row: 3 black, 12 white, 4 black, 1 grey, 11 black, 14 white, 3 black.

20th row: 2 black, 13 white, 4 black, 1 grey, 9 black, 16 white, 2 black.

21st row: 3 black, 12 white, 16 black, 14 white, 3 black.

22nd row: 2 black, 13 white, 16 black, 14 white, 2 black.

23rd row: 3 black, 12 white, 3 black, 1 white, 4 black, 2 grey, 6 black, 14 white, 3 black.

24th row: 2 black, 13 white, 2 black, 2 white, 3 black, 2 grey, 7 black, 14 white, 2 black.

25th row: 3 black, 12 white, 2 black, 2 white, 4 black, 2 grey, 6 black, 14 white, 3 black.

26th row: 2 black, 12 white, 3 black, 1 white, 5 black, 1 grey, 6 black, 15 white, 2 black.

27th row: 3 black, 12 white, 2 black, 2 white, 2 black, 1 white, 2 black, 1 grey, 6 black, 14 white, 3 black.

28th row: 2 black, 13 white, 2 black, 2 white, 2 black, 1 white, 9 black, 14 white, 2 black.

39th row: 3 black, 1 white, 1 black, 3 white, 3 black, 1 white, 8 black, 13 white, 3 black.

30th row: 2 black, 14 white, 1 black, 3 white, 3 black, 1 white, 4 black, 1 white, 3 black, 13 white, 2 black.

31st row: 3 black, 19 white, 1 black, 2 white, 2 black, 1 white, 2 grey, 1 white, 2 black, 12 white, 3 black.

32nd row: 2 black, 20 white, 2 grey, 1 white, 2 black, 2 white, 2 grey, 2 black, 12 white, 2 black.

33rd row: 3 black, 21 white, 1 grey, 3 black, 3 white, 3 black, 11 white, 3 black.

34th row: 2 black, 23 white, 1 grey, 3 black, 3 white, 4 black, 9 white, 2 black.

35th row: 3 black, 24 white, 3 black, 4 white, 3 black, 8 white, 3 black.

36th row: 2 black, 26 white, 1 black, 16 white, 2 black.

37th row: 3 black, 2 white, 3 black, 1 white, 1 black, 1 white, 1 black, 2 white, 1 black, 1 white, 3 black, 3 white, 3 black, 1 white, 1 black, 4 white, 1 black, 2 white, 1 black, 1 white, 3 black, 1 white, 1 black, 1 white, 1 black, 2 white, 3 black.

38th row: 2 black, 2 white, 1 black, 3 white, 2 black, 1 white, 1 black, 1 white, 1 black, 1 white, 2 black, 4 white, 1 black, 3 white, 2 black, 3 white, 2 black, 1 white, 1 black, 1 white, 2 black, 2 white, 4 black, 2 white, 2 black.

39th row: 3 black, 1 white, 1 black, 3 white, 3 black, 1 white, 2 black, 1 white, 1 black, 5 white, 1 black, 3 white, 3 black, 2 white, 1 black, 1 white, 2 black, 1 white, 1 black, 3 white, 1 black, 1 white, 1 black, 1 white, 1 black, 1 white, 3 black.

40th row: 2 black, 1 white, 3 black, 1 white, 1 black, 2 white, 1 black, 1 white, 1 black, 1 white, 3 black, 3 white, 3 black, 1 white, 1 black, 2 white, 1 black, 1 white, 1 black, 2 white, 1 black, 1 white, 3 black, 1 white, 1 black, 4 white, 1 black, 1 white, 2 black.

41st row: 3 black, 42 white, 3 black.

42nd row: 47 black.
43rd row: 48 black.

"Cloisonné" Petal or Scalloped Rug

(*Chapter XIV*)

The completed rug made according to dimensions given, measures forty-two by twenty-four inches. The colors are typical of those found in Chinese cloisonné, which is its inspiration.

Border

62	petals 2″ x 3½″	color, deep blue

Background

148	petals 2″ x 3½″	color, neutral blue

Foliage

12	petals 2″ x 4″	color, yellowish green foliage tips
24	petals 2″ x 3½″	color, deep blue-green foliage
2	petals 1½″ x 2½″	color, deep blue-green foliage double tipped; positioned, center ends of red flower

Blue Flower

4	petals 4″ x 3″	color, royal blue outer petals
4	petals 3″ x 3½″	color, lavender-blue middle petals
4	petals 2″ x 3½″	color, pale blue inner petals
1	circle 3″ diameter	color, grey-blue stamen circle
1	circle 1″ diameter	color, yellow pistil

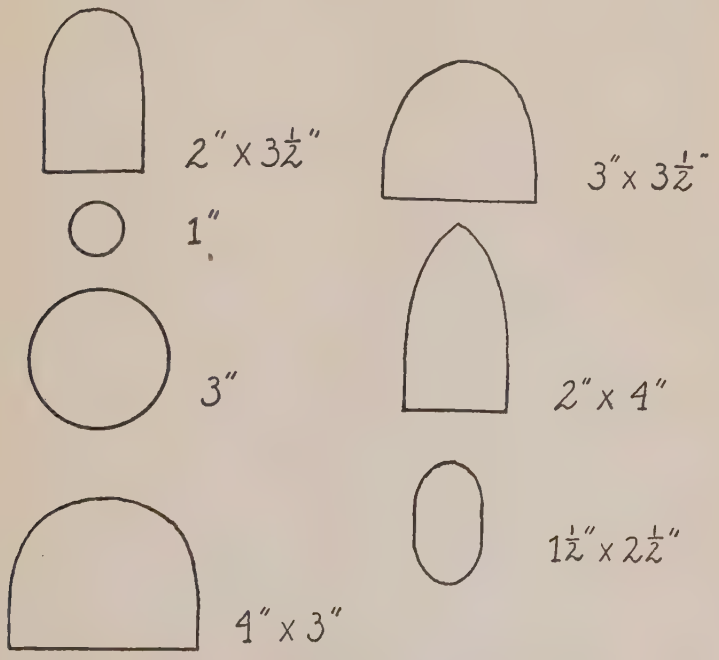
Red Flower

4	petals 4″ x 3″	color, dark red outer petals
4	petals 3″ x 3½″	color, rose-red middle petals
4	petals 2″ x 3½″	color, mauve inner petals

1	circle 3″ diameter	color, beige stamen circle
1	circle 1″ diameter	color, yellow pistil

Yellow Flower

4	petals 4″ x 3″	color, golden brown outer petals
4	petals 3″ x 3½″	color, greenish yellow middle-petals
4	petals 2″ x 3½″	color, pinkish yellow (warm écru) inner petal
1	circle 3″ diameter	color, salmon stamen circle
1	circle 1″ diameter	color, yellowish green pistil



SHAPES OF PETALS

Left-hand column shows floral units; right-hand, foliage units

Note: If the felt is assembled gradually from old hats, discarded felt flowers, etc., or any heavy non-fraying textile, some pieces of which must be dyed for correct color, it will be seen that a certain unevenness of tone in the same colors is desirable. If textiles require blanket stitching to protect edges, use coarse yellow crochet silk or mercerized crochet cotton. Directions for putting the rug together will be found in Chapter XIV.

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